MFIP

Reforming Welfare and Rewarding Work:

Final Report on the Minnesota Family Investment Program

Volume 2: Effects on Children

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Preface

This is the final report from an evaluation by MDRC of the Minnesota Family Investment Program (MFIP). The report is being published in three volumes: this report on the program's impacts on children (Volume 2); a companion report on its impacts on adults (Volume 1); and a summary report. The final report provides valuable insights into four major issues that are currently on the minds of decisionmakers across the country:

> What can states do to minimize the chances that long-term welfare recipients reach a time limit on welfare benefits without any way to support themselves?
>
> How should policymakers support the efforts of low-income workers to stay in their jobs and provide for their families in this era of time-limited welfare?
>
> How can social policies avoid penalizing marriage?
>
> How do the policy changes that states have made in moving their welfare systems from AFDC to TANF affect families and children?

Interestingly, the experimental program in Minnesota that is providing this rich and relevant information was designed without time limits and long before the passage of the landmark federal welfare reform law, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996. Dismayed by rising rates of child poverty, by a welfare system that was focused more on eligibility determination than on helping families to improve their circumstances, and by entry-level jobs that provided wages below the poverty line, Minnesota officials decided to move their system in a new direction.

MFIP's designers hoped that a new system that combined financial incentives to work with participation or work requirements for long-term recipients would increase work, reduce long-term welfare dependence, and reduce poverty for working families. To a remarkable degree, MFIP has achieved these goals, showing the most consistently positive results for single-parent long-term welfare recipients. For this group, the program increased work, increased earnings, reduced the use of welfare as a sole income source, reduced poverty, reduced domestic abuse, and reduced children's behavior problems and improved their school performance. Rarely is the story so consistently positive across such a wide range of outcomes for a group of families. In addition, MFIP produced a modest increase in marriage among single parents and a substantial increase in marital stability among two-parent families.

State officials were aware that this new system might cost more than the old AFDC system, and they were committed to finding out whether that investment was paying off in better outcomes for families and children. As a result, they and their government and foundation funding partners — including the staff at the U.S. Department of Health and Human Services who developed a child outcomes study spanning five state welfare reform initiatives — launched a comprehensive evaluation,

one component of which was a study of MFIP's effects on children. This study is providing information to people in Minnesota and elsewhere who share a keen interest in both identifying policies that show promise for improving the outcomes of low-income children and ensuring that efforts to change the welfare system do not cause harm to already vulnerable families. Critical questions include: How does employment that results from work or participation requirements affect children? Is poverty bad for children simply because families lack money, or because of other family characteristics that are associated with poverty? What kinds of investments will improve children's outcomes — additional services for low-income families? or financial support? This study (along with two others recently released by MDRC) provides some of the most rigorous evidence available to date that *money matters*. For very disadvantaged families (in this case, single-parent long-term recipients), providing financial support to parents as they move from welfare to work can improve children's outcomes.

At the same time, the results raise important questions about the tradeoffs that are perhaps inherent in welfare reform. The program costs more than the old AFDC system, and it allows people to remain on welfare longer, because families can continue to receive some benefits while they are working. Thus, for those whose primary goal is to reduce welfare caseloads and costs, the results presented here may not look positive. For those who are willing to trade some of those caseload reductions and cost savings for increases in work, reductions in poverty, improvements in child outcomes, or increases in marriage and marital stability (a finding that is intriguing but that we would like to see replicated), the results presented here will be of great interest.

The results also raise some important issues specific to the use of financial incentives within a time-limited welfare system. The message delivered by time limits is to leave welfare as quickly as possible and to use welfare as a last resort. Is it then a coherent policy to combine time limits with financial incentives that may keep families on welfare longer than they would be without those incentives? Should states try to reconcile those two policies by mechanisms such as "stopping the time-limit clock" for parents working a certain number of hours or by providing financial incentives outside the welfare system, or should families simply be informed about the two policies and allowed to make their own decisions about how to use their allotted time on welfare?

No one state study can answer all these questions, and the jury is still out on whether other states, as well as Minnesota, that use these incentives in the context of stricter work requirements, greater sanctions, and new time limits can achieve the same results.

Those of us who evaluate social programs always harbor the hope that our work not only will provide information needed by the state or locality that asked for the study but also will be seen as relevant, and will be used, by a broader audience of decisionmakers. Thanks to the foresight of both the program's designers and the funders who supported this research — and to the cooperation of the families who participated in the evaluation — this study promises to influence our thinking about future directions for welfare reform and supports for low-income workers for some time to come.

Judith M. Gueron
President

Acknowledgments

The final report on MFIP consists of three volumes: one report on the program's impacts on adults (Volume 1); a companion report on its impacts on children (Volume 2); and a summary report. These reports and MDRC's other reports evaluating the MFIP program reflect the contributions of numerous people over several years.

MFIP managers and their staff in the seven counties in Minnesota provided crucial support to the evaluation and played an important role by implementing the random assignment process that was fundamental to the research design. In addition, from 1994 to the present, they have been unfailingly cheerful and accommodating in providing MDRC researchers with insights into the program's implementation and operation.

Several people within the Minnesota Department of Human Services (DHS) also played key roles. Deborah Huskins, former Assistant Commissioner, and John Petraborg, former Deputy Commissioner, provided continuous support for the evaluation. Chuck Johnson, Director of the statewide MFIP program and an earlier Director of the MFIP evaluation, and Joel Kvamme, the evaluation's current Director, were unflagging in their commitment to, and engagement in, the evaluation process. They offered many insightful suggestions along the way in addition to helping us obtain data from several sources.

Other DHS staff members — Kathleen Hoglund, JoAnn Lindstrom, Joan Truhler, and Nancy Vivian — have been generous with their help and advice. They have provided ongoing information on the intricacies of state policies, in addition to reviewing surveys and other data collection instruments used by MDRC and providing some of the implementation data used in the reports. This type of assistance was also provided by Sheryl Lockwood and Mark Kleczewski, who additionally came through with heroic data collection efforts at critical points in the evaluation. David Hanson collected and distilled state fiscal information, which the benefit-cost analysis relied on, and provided helpful reviews of the benefit-cost approach. Denise Dorman helped provide automated data on welfare receipt.

MFIP staff supervisors Connie Herold and Janie McMichael contributed to our analysis of marriage effects by providing helpful ideas and suggestions, reviewing case files, and organizing meetings between researchers and caseworkers. Finally, Karen Schultz and John Thomas at the Minnesota Department of Economic Security provided automated data used for the analyses in this and earlier reports, and George Temple at the Department of Revenue provided useful tax data.

Members of MDRC's Income Studies Committee — Robert Solow, Henry Aaron, Rebecca Blank, Gary Burtless, David Ellwood, Mark Greenberg, and Robert Reischauer — offered valuable perspectives on drafts of the reports. In addition, Phil Robins provided comments on these and other reports. The report on children benefited from input and comments from Kris Moore, at Child Trends, from Martha Moorehouse and Howard Rolston at the U.S. Department of Health and Human Services, and from Lindsey Chase-Lansdale, Hiro Yoshihawa, and Greg Duncan. In addition, the efforts and expertise of federal agencies, representatives from states, and researchers and foundations

in the Project on State-Level Child Outcomes played an important role in developing the child survey instrument, informing the conceptual framework and providing valuable feedback during various stages of the report on children.

At MDRC, Barbara Goldman, MFIP's initial Project Director, has guided the evaluation from the outset, and over the years provided comments and insights to help shape the analysis and the reports. Gordon Berlin, David Butler, Judith Greissman, Judith Gueron, and Charles Michalopoulos provided helpful comments and advice on drafts of the reports. Robert Granger and Pamela Morris provided ongoing advice and comments on the report on children.

Lynn Miyazaki and Irene Robling managed the random assignment design and created the analysis files. Ms. Miyazaki also provided critical support in helping to obtain and process several key data files. Gregory Hoerz and Adria Gallup-Black served as liaisons to the survey subcontractor, Research Triangle Institute, and oversaw the survey effort. Debbie Romm designed and managed the development of the database system used to collect and structure the administrative data used in the impact analysis. Galina Farberova and Ken White processed administrative records. Charles Daniel, Joyce Dees, Donna George, Marguerite Payne, Carmen Troche, and Ngan Lee, with supervision from Shirley James, handled random assignment calls and processed baseline forms.

The evaluations's final reports benefited from the high-quality analysis and good-humored teamwork of five research assistants: Jared Smith was the lead programmer for the child analysis, processing and analyzing the survey data, and also processed the welfare and earnings records data and created programs for the adult impact analysis; David Seith wrote programs to process and analyze data from the client survey; Leslie Sperber collected and helped analyze data for the benefit-cost analysis and collected data from divorce records; Emily Danyluk assisted in the development of the benefit-cost estimates; and Chris Henrichson collected data from divorce records, coordinated the production of the reports, fact-checked text and tables, and ensured that the report process kept on schedule.

Bob Weber edited the reports, and Stephanie Cowell did the word processing.

The Authors

Executive Summary

In 1994, the state of Minnesota began a major welfare reform initiative aimed at encouraging work, reducing dependence on public assistance, and reducing poverty. The Minnesota Family Investment Program (MFIP) differed from the Aid to Families with Dependent Children (AFDC) system in three key ways:

- **Financial incentives to work.** In MFIP, more earnings were disregarded when calculating grant levels, and child care payments were paid directly to providers.
- **Participation requirements for long-term recipients.** If not working full time, long-term welfare recipients had to participate in services designed to move them quickly into the workforce.
- **Simplification of rules and procedures.** MFIP combined AFDC, Food Stamps, and the state-run Family General Assistance (FGA) program into a single program with one set of rules and procedures and one monthly payment.

A central concern surrounding the recent wave of welfare reforms is how children will fare if their parents are subject to such policies as work mandates, time limits, and enhanced earnings disregards. Although research in child development suggests that children are affected by changes in their parents' employment, income, and other aspects of the family environment, the net effects of these types of programs are not well understood. The findings in this report present one of the first looks at the effects of an innovative welfare reform policy on children. It also provides an unusual opportunity to more broadly assess how changes in income and employment can affect children's outcomes.

MFIP began operating in April 1994 in three urban and four rural Minnesota counties, and the Manpower Demonstration Research Corporation (MDRC), under contract with the Minnesota Department of Human Services (DHS), has been tracking its implementation and effects. Between April 1994 and March 1996, over 14,000 families were assigned at random, using a lottery-type process, to either the MFIP or the AFDC system. This study, which focuses on family and child well-being, follows a sample of families in the urban counties of the MFIP evaluation who had a child age 2 to 9 at the time of random assignment. MFIP's effects on families and children are assessed by comparing the outcomes for the experimental group (MFIP) and the control group (AFDC) three years after they entered the evaluation. *Reforming Welfare and Rewarding Work: Final Report on the Minnesota Family Investment Program, Effects on Adults*, Volume 1 of the final report on MFIP, discusses adults in the study and focuses on MFIP's effects on such economic outcomes as employment, earnings, welfare receipt, and income for the full evaluation sample.[1]

[1] C. Miller, V. Knox, L. Gennetian, M. Dodoo, J. A. Hunter, and C. Redcross, *Reforming Welfare and Rewarding Work: Final Report on the Minnesota Family Investment Program*, Vol. 1, *Effects on Adults* (New York: Manpower Demonstration Research Corporation, 2000).

I. Findings for Long-Term Recipients

Long-term recipients in this report are identified as those single mothers who had been on welfare for at least 24 of 36 months prior to random assignment. These single mothers were required to participate in employment-related services at the onset of the study.

- **Children in MFIP exhibited fewer behavioral problems and did better in school.** Compared with mothers in AFDC, single mothers in MFIP reported that their children exhibited fewer problem behaviors, such as being cruel, disobedient, or moody, and performed better and were more engaged in school. Although the improvements in these outcomes were moderate to small in magnitude, they are likely to have important implications for the future well-being of these children.

- **Mothers in MFIP were more likely to work and had higher incomes.** Throughout the three-year period, single mothers in MFIP, relative to those in AFDC, were more likely to work, earned more, and had higher incomes from earnings and welfare. About half the mothers who got jobs because of MFIP worked part time, and the other half worked full time. Most worked in moderate-wage jobs, and most stayed employed consistently.

- **Children in MFIP were more likely to be placed in child care, particularly child care centers, and they were more likely to have continuous health insurance coverage.** Single mothers in MFIP were more likely than mothers in AFDC to have used child care during the three-year period, especially formal care. Most of the mothers who used formal child care because of MFIP used it consistently. Children in MFIP were also more likely to have been covered consistently by health insurance, primarily Medicaid or MinnCare. The increase in consistent coverage most likely reflects the fact that, with MFIP's financial incentives, families were more likely to remain in the welfare system during the three-year period.

- **Mothers in MFIP were more likely to marry and less likely to experience domestic abuse.** Mothers in MFIP were more likely than those in AFDC to report being married at the three-year mark. They were also significantly less likely to report experiencing domestic abuse, by intimate partners and unrelated individuals, during this time.

II. Findings for Recent Applicants

Recent applicants in this report are identified as those single mothers who were new applicants to welfare or who had been on welfare for less than 24 months before random assignment.

- Children in MFIP generally fared similarly to other children. Single mothers in MFIP reported somewhat similar levels of behavioral problems and school progress for their young children as did mothers in AFDC.2 Young children in MFIP also were more likely to have been covered consistently by health insurance during the three-year period.

- **Mothers in MFIP were only slightly more likely to work and did not have higher earnings or incomes, and they experienced few other changes in their well-being.** Throughout the three-year period, most mothers in this group faced *only* the enhanced financial incentives, because the mandate to participate in employment-related services was targeted to long-term recipients. In general, MFIP had little effect on mothers' earnings and income and no effect on other outcomes, such as marriage, depression, and domestic abuse.

III. Conclusions

The findings indicate that encouraging long-term welfare recipients to work through a combination of financial incentives and a mandate to participate in employment-related services can have a range of positive effects on families and young school-age children. In addition, analyses presented in the report show that the key to producing these positive effects was allowing working mothers to keep more of their benefits. These enhanced financial incentives were critical to both increasing families' incomes and improving child outcomes.

Not all the mothers who went to work because of MFIP worked full time; many worked part time, and this may be an important part of the story. MFIP required mothers to work at least 30 hours per week if they were not participating in employment services, or 20 hours per week if they had a child under age 6. Many single mothers receiving welfare — particularly those with limited work experience — may have trouble balancing the demands of working full time and raising young children. It is possible that a program requiring all recipients to work full time would produce fewer positive effects on children.

MFIP had few effects on children in families who were new to welfare, which is not surprising because it had few effects on mothers' employment or other aspects of their well-being. During most of the three-year period, the majority of recent applicant families were given only the enhanced financial incentives, because the mandatory employment-related services were targeted to long-term recipients. In fact, analyses presented in the report suggest that offering financial incentives alone and no services to find a job may have had some negative effects on recent applicant families, by increasing mothers' stress and depression, especially among those mothers who wanted to enter employment but did not know how. Many mothers apply for welfare following the birth of a child, divorce, or job loss, and allowing them to mix work with welfare longer than they would otherwise, or encouraging them to work before they feel ready to, may partly explain the negative effects.

[2] Adolescent children in MFIP fared less well on some measures of schooling.

In 1998, Minnesota implemented a modified version of MFIP statewide (MFIP-S) to replace its AFDC system, and these findings provide a starting point for predicting its potential effects. The new program differs from MFIP in two key ways: (1) the financial incentives are somewhat less generous, and (2) recipients are required to work 35 hours per week or to participate in employment-related services after only six months of welfare receipt. Because the financial incentives are fairly similar to those in the original program, MFIP-S is still expected to increase working families' incomes and reduce poverty. The 35-hour work requirement may be an important difference, and program designers should continue to evaluate its effects on mothers and children. Finally, placing the participation mandate sooner might move more mothers who have recently applied for welfare into work and might have positive effects on children. However, many families apply for welfare as the result of a new birth, divorce, or job loss, and the effects of immediate incentives and mandates on families in the midst of upheaval are difficult to predict.

Table ES1

Summary of MFIP's Impacts for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Impact (Difference)	
Child Outcomes				
Behavioral Problems Index	11.2	12.7	-1.5	*
Positive Behavior Scale	194.2	193.7	0.5	
Child's health rated by mother as very good or excellent (%)	75.0	77.8	-2.8	
Any child have accident/injury that required a visit to an emergency room or clinic? (%)	44.0	36.9	7.1	*
Performance in school	4.1	4.0	0.2	*
Engagement in school	10.2	9.9	0.3	**
Direct Outcomes				
Average quarterly employment rate (%)	72.8	57.7	15.1	***
Average annual earnings ($)	4,657	3,906	751	*
Average annual welfare benefit ($)	7,014	6,458	556	**
Average annual income from benefits and earnings ($)	11,671	10,364	1,307	***
Intermediate Outcomes				
Children continuously covered by health insurance during past 36 months (%)	75.5	67.0	8.5	**
Formal child care (%)	52.8	42.3	10.6	***
Informal child care (%)	75.2	67.7	7.5	*
Total HOME scale	75.7	75.5	0.2	
Currently married (%)	11.3	6.2	5.0	**
Mother ever abused in last 3 years (%)	49.1	59.6	-10.5	**
Mother at high risk of clinical depression (%)	28.8	31.6	-2.8	
Parenting behavior				
Aggravation scale	1.8	1.9	-0.1	
Warmth scale	3.4	3.5	0.0	
Harsh-parenting scale	1.7	1.7	0.0	
Supervision scale	4.7	4.5	0.1	**
Sample size (total = 587)	306	281		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records, public assistance records, and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who were on welfare for two years or more prior to random assignment and had a focal child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for an explanation of the outcomes.

Table ES2

Summary of MFIP's Impacts for Recent Applicants in Urban Counties

Outcome	MFIP	AFDC	Impact (Difference)	
Child Outcomes				
Behavioral Problems Index	10.8	9.8	1.0	
Positive Behavior Scale	196.8	200.0	-3.2	
Child's health rated by mother as very good or excellent (%)	77.2	78.7	-1.4	
Any child have accident/injury that required a visit to an emergency room or clinic? (%)	44.8	43.5	1.4	
Performance in school	4.2	4.3	-0.1	
Engagement in school	10.2	10.4	-0.2	
Direct Outcomes				
Average quarterly employment rate (%)	74.6	71.2	3.3	
Average annual earnings ($)	6,817	7,438	-620	
Average annual welfare benefit ($)	4,530	3,772	757	***
Average annual income from benefits and earnings ($)	11,347	11,210	137	
Intermediate Outcomes				
Children continuously covered by health insurance during past 36 months (%)	69.9	62.7	7.2	*
Formal child care (%)	53.7	48.8	4.9	
Informal child care (%)	73.9	76.6	-2.7	
Total HOME scale	78.4	78.7	-0.3	
Currently married (%)	23.5	20.8	2.7	
Mother ever abused in last 3 years (%)	48.6	49.1	-0.4	
Mother at high risk of clinical depression (%)	32.0	30.6	1.5	
Parenting behavior	#N/A	#N/A	#N/A	
Aggravation scale	1.8	1.7	0.0	
Warmth scale	3.5	3.4	0.1	
Harsh-parenting scale	1.7	1.5	0.1	**
Supervision scale	4.6	4.6	-0.1	
Sample size (total = 517)	258	259		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records, public assistance records, and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who were on welfare for two years or more prior to random assignment and had a focal child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for an explanation of the outcomes.

Chapter 1

Introduction and Hypotheses

I. Introduction

In 1994, the state of Minnesota began a major welfare reform initiative aimed at encouraging work, reducing dependence on public assistance, and reducing poverty. The program attempted to achieve its goals with a two-part approach: (1) financial incentives to encourage work and (2) mandatory participation in employment-focused activities for long-term welfare recipients. Minnesota's approach to welfare reform differed from earlier programs in that it placed equal emphasis on increasing employment and making families better off. Underlying the design of the program was a desire not only to affect the employment behavior of adults but also to improve the lives of children. Poverty rates had increased for families with children since the mid-1970s; at the same time, welfare benefits under the Aid to Families with Dependent Children (AFDC) system had not kept pace with inflation. In 1997, one in five children in the United States lived in poverty (Annie Casey Foundation, 1997).

The desire to improve the lives of children is implicit in many of the welfare reform programs being implemented across the country. Yet little is known about the effects of welfare and employment policies (such as work mandates, time limits, and enhanced earnings disregards) on children's well-being, in part because the ways in which family income and mothers' employment affect children are not well understood. Children may benefit from welfare reform, for example, if their parents respond to work incentives by increasing their earnings and becoming self-sufficient. Alternatively, children may bear the costs of reform if their mothers' employment adds stress to the family or exposes them to poor-quality child care.

Before passage of the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), a number of states were granted federal waivers to implement and test innovative welfare reform policies. This report presents one of the first looks into the effects on children of one such policy — the Minnesota Family Investment Program (MFIP).[1] It also provides some of the only experimental evidence available about the effects of providing increased income to working-poor families. MFIP's random assignment design provides a powerful tool for examining the effects of MFIP on a variety of family and child outcomes. This type of evidence about the effects on children of policies that increase income is rare. Furthermore, the lessons that Minnesota has learned in the process of implementing MFIP and rigorously evaluating its results will be of value nationally, as states try to respond thoughtfully to the new flexibility provided to them under PRWORA.

MFIP was first implemented on a field trial basis in April 1994, in the three urban counties of Anoka, Dakota, and Hennepin (Minneapolis) and the four rural counties of Mille Lacs, Morrison, Sherburne, and Todd. The Minnesota Department of Human Services (DHS) contracted with the Man-

[1]The MFIP child study is the first of five state reports to be issued by MDRC and other evaluators participating in the Project on State-Level Child Outcomes, a cross-state project aimed at measuring the effects of state welfare reform initiatives on family and child well-being.

power Demonstration Research Corporation (MDRC) to evaluate the new program. Minnesota's initial experiences with MFIP culminated in the passage of legislation that established a revised version of MFIP as Minnesota's plan under Temporary Assistance for Needy Families (TANF), the federal public assistance program that has replaced (AFDC). The current statewide MFIP program (MFIP-S) is described later in this chapter. Although this report evaluates only the version of MFIP that was implemented in 1994, many components of the two programs are similar.

The full evaluation of MFIP's effects are presented in two companion reports and a summary document. *Reforming Welfare and Rewarding Work: Final Report on the Minnesota Family Investment Program*, Volume 1, *Effects on Adults* (Miller et al., 2000), presents MFIP's effects on parents' participation in employment-related activities, employment and earnings, welfare receipt, and income.[2] Briefly, the results from Volume 1 indicate that MFIP significantly increased employment, earnings, and income for single parents in the urban counties who had been receiving welfare for two years or more when they entered the evaluation. For single parents who had started receiving welfare more recently, MFIP modestly increased employment rates and increased incomes by allowing participants to keep more of their welfare benefits while they worked. MFIP reduced the labor supply effort of one parent in two-parent families, and it increased marital stability.

This report is Volume 2 of the study and examines MFIP's effects on children using a sample of single-mother families[3] with preschool- and school-age children who entered the evaluation between April and October 1994. The effects of MFIP are evaluated by comparing outcomes for families randomly assigned to MFIP with outcomes for families randomly assigned to the AFDC system. Data on family and child well-being were obtained from a survey administered to the families three years after they entered the program. The survey collected information on child and family well-being, including family employment and income; parents' psychological well-being and parenting practices; and children's behavior, health, and school progress.

This report contributes to emerging results on the implications of welfare reform interventions for child and family well-being.[4] As a program that aims to increase both employment and income, the results from MFIP provide a snapshot not only of the effects of similar antipoverty programs on children but also of the effects of maternal employment and income on the well-being of children.

To set the context for the MFIP child evaluation, Section II of this chapter outlines the main components of the MFIP model, and Section III describes the MFIP evaluation. Section IV presents a conceptual model to illustrate how MFIP may affect children, and Section V lays out the key policy

[2]Volume 1 primarily examines the effects of MFIP on employment, employment characteristics, and income and includes a cost-benefit analysis for all single-parent and two-parent families included in the MFIP evaluation.

[3]Technically, it is only the mother, not the whole family, who is in the research sample.

[4]Some examples of emerging results include the effects on children from the Canadian Self-Sufficiency Project (Morris and Michalopoulos, 2000), the National Evaluation of Welfare-to-Work Strategies (McGroder et al., 2000), and Milwaukee's New Hope Project (Bos et al., 1999). Although none of these studies is explicitly about post-1996 welfare reform in the United States, all of them evaluate components of interventions that are similar to strategies being used in current welfare reform initiatives.

questions to be addressed. Then Section VI discusses the economic and policy contexts of the MFIP evaluation. The chapter ends with a brief discussion of how the report is organized.

II. The MFIP Model

As implemented in 1994, MFIP integrated several programs in the Minnesota welfare system. These included (1) AFDC (the core of the traditional system); (2) STRIDE, the state's employment and training program, which operated on a voluntary basis for certain targeted groups of AFDC recipients;[5] (3) the state-run Family General Assistance (FGA) program, which allowed some low-income families to qualify for welfare who would not have qualified under AFDC; and (4) the federally funded Food Stamp program, which provided assistance in the form of coupons to be spent on food.[6] MFIP did not replace or change Medicaid, the federal-state health program serving low-income families, which was available equally to recipients of MFIP or AFDC.

In 1994, under AFDC, a single mother received a monthly grant including cash benefits, Food Stamp coupons, and Medicaid. If she worked, her welfare grant was reduced as she earned income, by an amount that increased over time. A parent with two children was no longer eligible for assistance after her monthly earnings reached $1,487. All nonexempt new AFDC recipients (those not caring for a child under age 3 or not working for at least 30 hours per week) received an orientation to the STRIDE program, which provided education, training, and other services. Those in a STRIDE "target group" were eligible to volunteer for STRIDE.[7] A woman who volunteered for STRIDE met with a case manager to develop a self-sufficiency plan aimed at securing a job at a wage rate high enough to move her family off assistance and out of poverty.

Box 1.1 summarizes the primary components of the MFIP model and compares MFIP with the AFDC system. (A more complete comparison is provided in Appendix A, Table A.1.) MFIP differed from the AFDC system in three fundamental ways:

- **MFIP made work pay for families on welfare.** In both MFIP and AFDC, welfare benefits decreased as earned income rose, although a certain amount of income was disregarded (that is, not counted) when benefits were calculated. Working families in MFIP, however, kept more of their monthly financial benefits because more of their earnings were disregarded when their benefit amount was calculated. Moreover, whereas the AFDC earnings disregards decreased over time, the relatively higher benefits for working MFIP families were available as long as the family

[5]STRIDE was operated with funding from the Job Opportunities and Basic Skills Training (JOBS) program, which was established by the Family Support Act of 1988 and designed to move people from welfare to work through education, training, and work experience.

[6]Throughout this report, the terms "welfare" and "public assistance" are used to represent the range of benefits that were provided at the time in either the MFIP or the AFDC system, including MFIP, AFDC, FGA, and Food Stamps.

[7]This included women who were on welfare for 36 of the past 60 months, were under age 24, and did not have a high school diploma or its equivalent; it also included women who were within two years of becoming ineligible for aid because their youngest child was 16 or older.

stayed in MFIP. MFIP's more generous earnings disregard ensured that working always resulted in more income than not working.[8]

Box 1.1

Key Components of the MFIP Model Compared with AFDC

MFIP	AFDC
•Financial work incentives: recipients eligible for welfare until income reaches 140 percent of the poverty level	•Sharp reduction in benefits as earnings rise
•Employment and training participation requirement for single parents receiving assistance for 24 of the past 36 months	•Voluntary, education-focused STRIDE program
•Child care subsidies paid directly to provider if recipient working while on welfare	•Child care reimbursed through grant
•Consolidation of AFDC, Food Stamps, and Family General Assistance; Food Stamps cashed out	•Separate programs with different rules

For example, a single parent with two children who had no income from work received the same amount of welfare benefits ($769 in 1994) under MFIP or under AFDC. If she worked 20 hours per week at $6 per hour, her grant was reduced by $237 less under MFIP than it would have been under AFDC. This raised the reward for working — the difference in total income between working and not working — from $255 to $492, an increase of 93 percent. If she worked 40 hours per week, the reward for working increased by 27 percent. Compared with the AFDC system, MFIP provided not only an incentive to work but also a relatively greater incentive to work part time than full time. MFIP allowed families to continue to re-

[8]MFIP's benefit structure was more generous than AFDC's in several ways besides the enhanced earned income disregard. First, in MFIP, earnings were budgeted retrospectively so that the first two months of earnings after starting a job were not counted against the MFIP grant. Second, if a person faced a significant loss in earnings because of losing a job, the MFIP grant was immediately increased to make up for that loss. Finally, even for families without earnings, some changes in eligibility rules were to the benefit of MFIP families. In particular, the basic MFIP grant at the time assumed that all families would have received the maximum Food Stamp shelter deduction if they had been in the Food Stamp program.

ceive supplemental benefits while they worked, until their income reached approximately 140 percent of the poverty level.

MFIP also encouraged work by paying child care expenses directly to the provider, leaving no up-front costs. Under the AFDC program, families were required to pay for child care up front, and they were subsequently reimbursed — a process that could take up to two months. The actual amount of the child care reimbursement was the same under MFIP and AFDC.

- **MFIP required long-term welfare recipients to participate in employment and training services.** Many public assistance recipients left welfare quickly on their own, while others were expected to respond to MFIP's financial incentives by finding jobs. To target services and control costs, only single parents who received welfare benefits for two of the past three years were required to participate in MFIP's employment and training activities, unless they were working more than 30 hours per week, had a child under age 1, or met other "good cause" criteria. Single-parent recipients of AFDC were under no such obligation. MFIP included a menu of job search, short-term training, and educational activities. MFIP differed from STRIDE in that STRIDE was essentially a voluntary program and had a strong focus on education and training, whereas MFIP was mandatory and had a strong focus on rapid entry into employment.[9] Individuals who failed to comply with the participation mandate in MFIP were sanctioned — that is, their monthly welfare payments were reduced by 10 percent.

- **MFIP consolidated benefits and simplified public assistance rules and procedures.** MFIP simplified public assistance rules and procedures by combining AFDC, Minnesota's Family General Assistance (FGA), and Food Stamps into a single program and by providing Food Stamps as part of the cash grant.

Program rules were especially simplified for two-parent families, the majority of whom faced multiple work requirements in order to be eligible for the AFDC-Unemployed Parent (AFDC-UP) program. MFIP streamlined eligibility rules for two-parent families, and these streamlined rules also benefited any parent who was single at the time of random assignment and then married the father of her child while receiving MFIP benefits.

III. The MFIP Evaluation

MFIP was implemented as a field trial on April 1, 1994. To evaluate the effects of MFIP relative to the AFDC system, a random assignment design was used. Between April 1994 and March 1996, over 14,000 applicants for and recipients of public assistance were randomly assigned to either the AFDC system or the MFIP system.

[9] Only the initial orientation to STRIDE was mandatory.

In order to assess the effects of MFIP on family and child well-being, single-mother families were followed for three years, to obtain information on welfare receipt, employment, earnings, income and poverty, and a variety of other measures. MFIP's impacts on each of these measures were estimated by comparing average outcomes across the research groups. The difference in outcomes between the MFIP group and the AFDC group reflects the "impact" of MFIP. The process of random assignment provides a powerful tool for estimating program impacts in this fashion. Because families were randomly assigned to different research groups, any resulting differences in outcomes across groups should be driven only by the program intervention.

A. Research Groups

Single-parent families in the urban counties (Anoka, Dakota, and Hennepin) were assigned to one of three research groups: MFIP, AFDC, or MFIP Incentives Only.[10] Figure 1.1 presents MFIP's random assignment design in urban counties.

1. MFIP. All single-parent families assigned to the MFIP group received the full MFIP program (MFIP benefits and financial incentives). After they had received public assistance for 24 of the past 36 months, they were required to participate in MFIP's employment and training services.

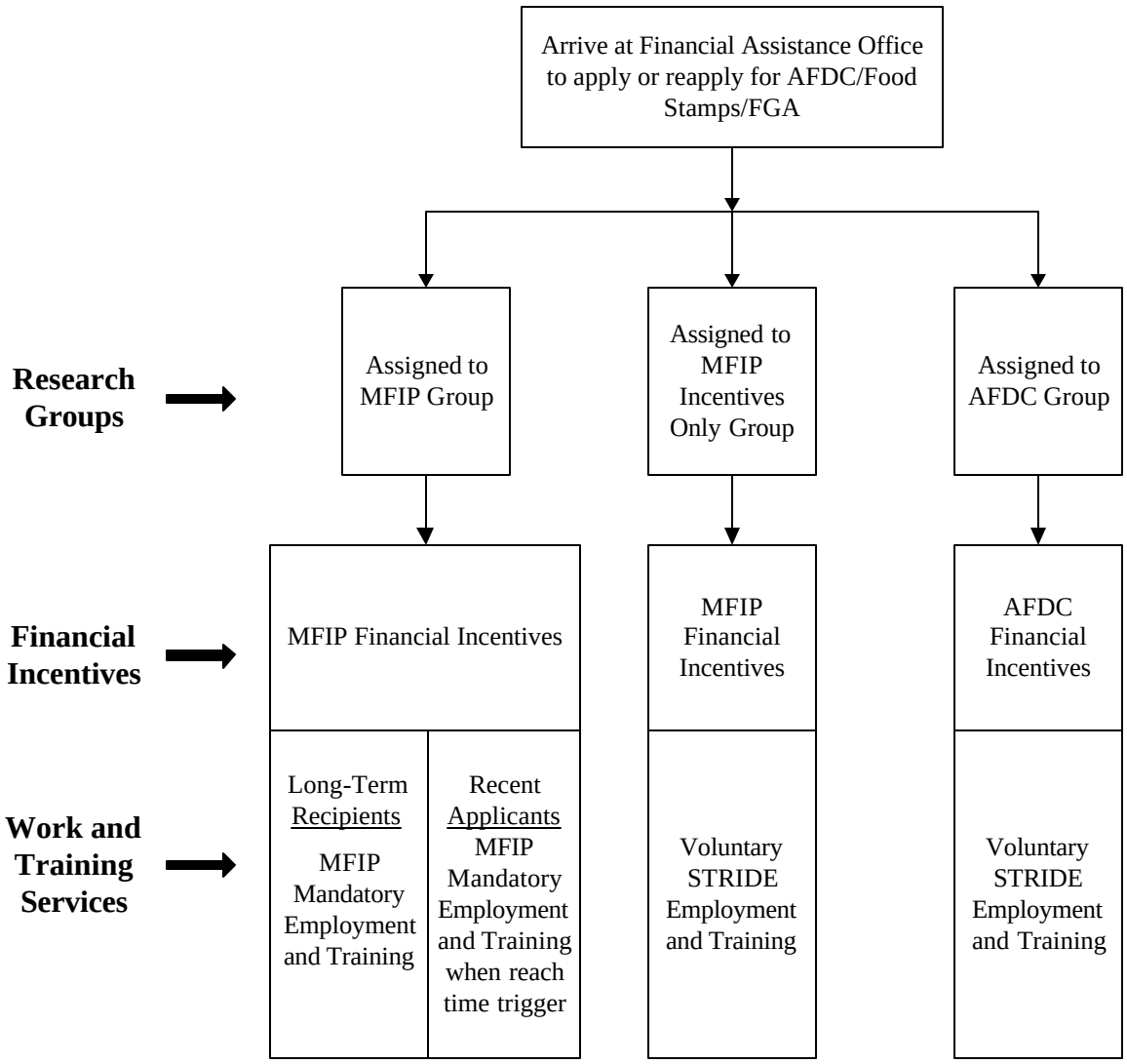
2. AFDC. Single-parent families assigned to the ADFC group were eligible for the typical benefits and services offered by Minnesota's AFDC and STRIDE programs. They were subject to the financial rules of the AFDC system and, if in a STRIDE target group, were eligible to volunteer for STRIDE services.

3. MFIP Incentives Only. This third research group was created for the purpose of the evaluation in order to help disentangle the effects of MFIP's two components — financial incentives and mandatory employment and training services. Single-parent families assigned to this group received MFIP benefits and financial incentives; the rules regarding the incentives were explained to them at their initial eligibility interviews. In addition, if eligible, they could volunteer to participate in STRIDE services. Members of this group were not subject to time-triggered, mandatory services and were not eligible for MFIP employment and training services. "MFIP Incentives Only" is used as shorthand to depict all of MFIP's financial changes (including the enhanced earned income disregard, the Food Stamp cash-out, changes in child care reimbursement, and other eligibility changes).

[10]Single-parent families in the rural counties and two-parent families were randomly assigned to only two research groups: MFIP and AFDC. Actually, single-parent families in Hennepin County were assigned to *four* research groups: MFIP, MFIP Incentives Only, AFDC with STRIDE, or AFDC without STRIDE. But the evaluation did not include a full-scale analysis of the fourth group, and none of these families were included in the sample analyzed for this report.

Figure 1.1

MFIP Child Report Random Assignment Design in Urban Counties



The first two groups are of primary interest in this evaluation and are key to describing MFIP's overall impacts. A comparison of outcomes between the MFIP and AFDC groups will answer the question, *What is the impact, when compared with the AFDC system, of providing and marketing financial incentives in combination with time-triggered mandatory employment and training services?*

A comparison of outcomes for the MFIP Incentives Only and AFDC groups will answer the question, *What is the impact, when compared with the AFDC system, of offering MFIP's financial incentives without the mandatory employment and training services?*

A comparison of outcomes for the MFIP and MFIP Incentives Only groups will answer the question, *What is the impact, when compared with the AFDC system, of adding mandatory services and a reinforced incentive message to the financial incentive?* The MFIP and MFIP Incentives Only groups received the same financial incentives to work, but members of the MFIP group were required to participate in employment services (when they became eligible), in which the financial incentives message was reinforced ("marketed") further. The decomposition of MFIP's impacts does *not* answer the question, *What are the effects of mandatory services alone?* To answer that question would require a comparison between the AFDC group and a group that received MFIP's mandatory services with no financial incentives. The effects of adding mandatory services to existing financial incentives could be larger or smaller than the effects of providing mandatory services in the absence of financial incentives. A more detailed discussion about the predicted effects of adding mandatory services compared with providing financial incentives alone is in Chapter 4.

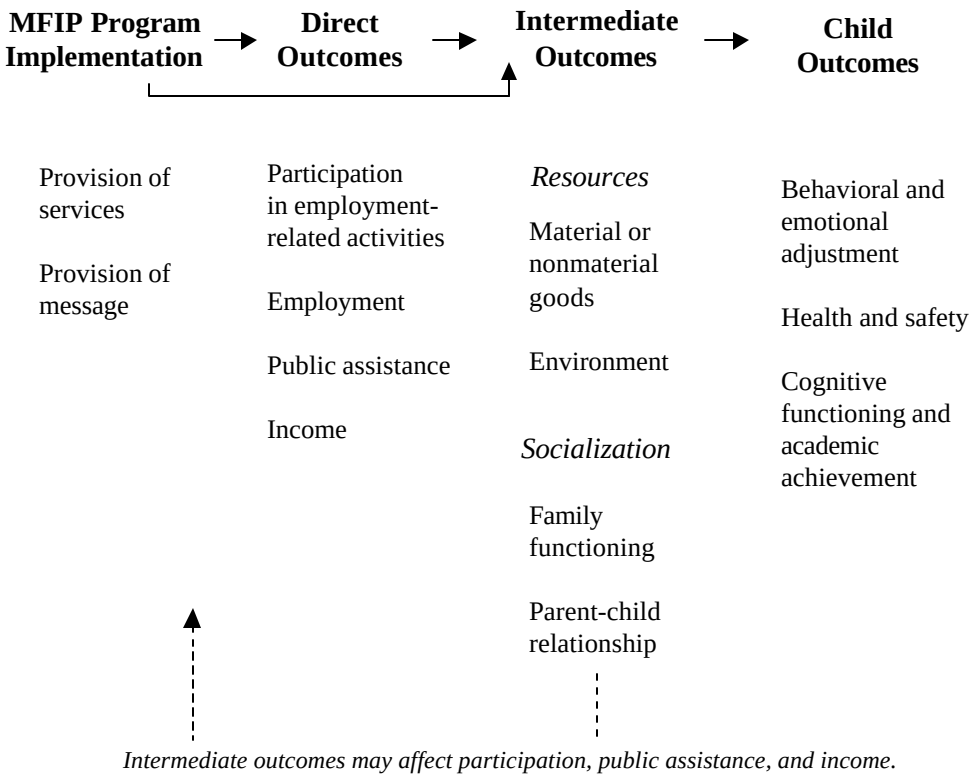
Although these research groups were described for single parents, recipients' status as single parents could change during the course of the evaluation. If a single mother in MFIP married the father of one of her children during the evaluation, the parents became an MFIP two-parent family. If they received public assistance for 6 of the past 12 months, one earner in that family was required to participate in MFIP's employment and training services. A single mother in MFIP who married someone other than the father of her child remained an MFIP single-parent family, and the stepfather income disregard was higher than under the AFDC system.

IV. How May MFIP Affect Children?

Even though MFIP was designed primarily to affect the employment behavior of adults, it may also affect children's well-being in a number of ways; for example, MFIP's effects on the employment and income of single mothers are two important factors. Figure 1.2 presents a conceptual model of the hypothesized effects of MFIP on child outcomes. The first column of this model emphasizes the primary components of the MFIP model: effectively communicating the program's benefits (for example, all of MFIP's financial incentives) and its work requirements (including sanctions for not meeting participation requirements). As shown in the second column of the model, effective implementation is critical to MFIP's success in significantly affecting employment, earnings, and income of single-parent families. The model proposes that MFIP's benefits, messages, services, and requirements affect the direct outcomes of the program — employment, income, and receipt of welfare. These, in turn, affect such "intermediate outcomes" as

Figure 1.2

Conceptual Model of the Effects of MFIP on Child Outcomes



NOTE: Outcomes within each column may also interact with or influence each other.

child care, family structure, and parenting (the third column), which then may affect children's behavior, academic achievement, and health and safety (the fourth column).[11]

Theories developed from economics, sociology, and psychology provide a framework for thinking about how MFIP may affect children. These theories are depicted in the third column of the model via two primary pathways: resources and socialization. The *resources pathway* hypothesizes that changes in employment and income or changes in the provision of benefits or services may lead to changes in access to material and nonmaterial resources. For example, with increased income, parents may be able to buy more or better food, or books and other educational materials, or may invest in their child's education. The *socialization pathway* hypothesizes that changes in employment and income or in provision of benefits or services may lead to changes in family functioning, parenting practices, and the presence of role models. For example, increased stress may accompany the increased demands on balancing work and family, and this may lead to changes in parenting. The outcomes that are affected by the resources pathway or the socialization pathway are termed "intermediate" in Figure 1.2. Some of them are measured in this study, including material resources, child care, and family structure. Others, such as objective observations of parent-child interaction, are not measured. Although some intermediate outcomes may clearly affect children via either one of these pathways, others may affect children via both pathways. For example, household composition may affect children by changing both the availability of material resources in the home and the character of the parent-child relationship.

As a conceptual model, Figure 1.2 simplifies the complex ways in which MFIP may affect family and child outcomes and the multiple interactions and influences that these outcomes may have on each other. It is feasible that some components of the MFIP intervention may have a direct effect on intermediate outcomes. For example, by altering the payment form for child care assistance, MFIP may have an effect on child care use or the type of child care used, independent of its effect on employment. In addition to affecting children's well-being, the resources and socialization pathways may have feedback effects on MFIP's direct outcomes. For example, parents' access to child care and their enhanced self-esteem may influence their employment as well as children's well-being. The primary goal of this report is to assess whether MFIP has an impact on child outcomes. Although the analysis in this report will not be able to determine conclusively the causal pathways by which MFIP affects child outcomes, the pattern of program impacts may inform us about some of the probable causal pathways.[12]

Emerging results from other experimental evaluations of welfare, employment, and antipoverty programs provide some benchmark for predicting how MFIP may affect children.[13] Experimental pro-

[11]Note that MFIP may also affect children even if it has no impact on parents' employment, earnings, or income. For example, program group members may feel more stressed or anxious after hearing about the program's participation requirements, and this stress may affect parent-child interaction, which, in turn, may affect children's well-being.

[12]Future work, largely through MDRC's Next Generation Project, will explore the multiple ways in which MFIP's impacts mediated its effects on children.

[13]The results from the New Chance Demonstration and the Teenage Parent Demonstration are also informative, although both evaluations focused on teen mothers. New Chance had no effect on mothers' employment, welfare receipt, or training credentials and had no effect on children's preschool readiness; it had small negative effects on maternal ratings of children's behavior (Quint, Bos, and Polit, 1997). The Teenage Parent Demonstration had positive (continued)

grams that primarily increased employment — such as the labor force attachment (LFA) programs in the 11 sites of the National Evaluation of Welfare-to-Work Strategies (NEWWS) — found few impacts on children at the two-year follow-up point (Hamilton, 2000; McGroder et al., 2000). Other experimental programs that increased family income as well as employment — such as the New Hope Project for low-income families in Milwaukee, Wisconsin, and the Canadian Self-Sufficiency Project (SSP) — generally found neutral or positive impacts on child outcomes, especially for young school-age children (Bos et al., 1999; Morris and Michalopolous, 2000).

More specific selected hypotheses about how MFIP may affect child outcomes are discussed below. These hypotheses focus on how MFIP's effects on employment, income, and child care may affect children's well-being. Each hypothesis is followed by a brief review of the relevant empirical literature. As previously discussed, MFIP may also affect a number of intermediate outcomes, such as marriage, parenting, and home environment. The literature relevant to these outcomes is discussed in later chapters of this report, when the impact results for each outcome are presented and interpreted. It is important to note that much of the review of empirical literature is not based on data from experimental evaluations. Consequently, in many of these nonexperimental studies, unmeasured characteristics of the families of children may confound the findings. For example, poor and nonpoor families may differ by characteristics other than their poverty, such as the ability to work, and these characteristics may be driving the difference between poor and nonpoor children. Nonetheless, a literature review informs the main hypotheses about how MFIP may affect children and highlights the contribution of this study to current knowledge about the effects of income and employment on the well-being of low-income children.

- **By increasing family income and reducing child poverty, MFIP may improve children's well-being.**

Reducing or eliminating the time a child lives in poverty may have large and lasting benefits. Children in poverty are more likely to experience poor health, to score lower on standardized IQ and achievement tests, and to be retained in grade and to drop out (Smith, Brooks-Gunn, Lee, and Klebanov, 1997; Haveman and Wolfe, 1995). These associations are especially strong for those children in persistent poverty, who experience poverty during the early childhood years, and for children in very poor families, that is, whose family income is 50 percent of the poverty level (Smith, Brooks-Gunn, Lee, and Klebanov, 1997; Duncan, Brooks-Gunn, and Klebanov, 1994; Duncan and Brooks-Gunn, 1997a). The effects of poverty may also vary for different domains of child development; the effects on emotional outcomes are not as large as those on cognitive outcomes (Duncan and Brooks-Gunn, 1997a).

- **By increasing employment, MFIP may affect children in a variety of ways, particularly by increasing their time spent in child care and in out-of-school or unsupervised activities. The effect of parents' increased employment on children's well-being is ambiguous.**

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effects on teen mothers' schooling and employment, although these impacts faded during a four-year follow-up, and it had no effect on children's well-being (Kisker, Rangarajan, and Boller, 1998).

Long-term recipients (those on welfare for two years or more) are required in MFIP to participate in mandatory employment and training activities and are exempt only if they already work 30 hours or more per week. Some mothers of children under age 6 who were working 20 hours or more per week were required to participate only in case management. Furthermore, MFIP's financial incentives alone provided an incentive to work, particularly part time. In general, MFIP participants may be more likely to participate in the labor force or to increase their hours of employment. Although this leaves mothers with less time to spend with their children, it also provides more income for mothers to spend on their children. The following hypotheses focus on the effects of maternal employment per se.

The research about the effects of maternal employment on children's well-being focuses on whether or not maternal employment — or the absence of the mother as a primary caregiver — has a detrimental effect, particularly during a child's infant and toddler years. With the exception of some negative effects during a child's first year of life and on boys, this research generally finds that maternal employment has few detrimental effects on child outcomes (Baydar and Brooks-Gunn, 1991; Desai, Chase-Lansdale, and Michael, 1989; Harvey, 1999; Haveman and Wolfe, 1995; Blau and Grossberg, 1992). Negative effects are associated, however, with greater hours of employment when a child is very young, with employment that is not voluntary, and with employment in jobs of low quality (those with low wages or little complexity) (Harvey, 1999; Farel, 1980; Alvarez, 1985; Parcel and Menaghan, 1994, 1997). For some children, such as those in low-income families or in single-mother families, maternal employment is associated with positive effects on child outcomes (Harvey, 1999; Moore and Driscoll, 1997; Zaslow and Emig, 1997).

Maternal employment may affect children's well-being through increased use of child care, out-of-school activities, or reliance on children taking care of themselves. Nonmaternal child care, including compensatory education programs, during a child's infant and preschool years is associated with improved cognitive functioning (Caughy, DiPietro, and Strobino, 1994; Currie and Thomas, 1995; Lamb, 1998). Evidence about the effects of child care on children's problem behavior is mixed. Recent work does not support earlier results that early, extensive, and continuous care is associated with problematic child behavior, although problem behavior associated with child care may not emerge until children are older (NICHD Early Child Care Research Network, 1998). Children, particularly low-income children, may benefit from high-quality care (Blau, 1997; Lamb, 1998; NICHD Early Child Care Research Network, 1998) and child care that is stable (Clarke-Stewart, 1991). School-age children may benefit from formal after-school activities that provide stimulating academic environments (Posner and Vandell, 1994, 1999; Pettit, Bates, Dodge, and Meece, 1999). However, school-age children may also experience more self-care. Children who are not supervised are at greater risk of receiving poor grades and of engaging in risk-taking behavior such as substance use — especially if children begin self-care at younger ages (Dwyer et al., 1990; Pettit et al., 1999).

- **By increasing child care assistance and increasing income, MFIP may increase the use of child care or alter the type or quality of care used.**

In addition to changes in child care brought about by maternal employment, MFIP may affect the amount or type of care used, because MFIP compensates child care providers directly and because MFIP participants may be better informed about child care subsidies. Families with access to subsidies

that directly reimburse the provider versus other types of reimbursement schemes are more likely to use center-based daycare (Phillips, 1995). This may benefit low-income children especially, because center-based care is likely to be of higher quality than in-home care (NICHD Early Child Care Research Network, 1997). High-quality care has a positive association with children's intellectual, verbal, and cognitive development, especially for children who are economically disadvantaged.[14] High-quality care may also mitigate any adverse effects associated with early, extensive, or unstable care, especially for children at high risk of problematic socioemotional functioning (NICHD Early Child Care Research Network, 1998). MFIP participants may use their increased income to invest in out-of-school programs for their children.

- **By tying working-poor families to the welfare system and its benefits, MFIP could either improve or have negative effects on children's well-being.**

Some of the effect of income may be mediated by its source. For example, the empirical research which examines the independent effect of welfare dependence on child outcomes finds that an additional dollar of welfare income may not have the same effect as an additional dollar of earned income. More specifically, controlling for income, researchers have found that growing up in a welfare-dependent family has a detrimental impact on completed years of schooling and on being economically active and may increase the likelihood of being welfare dependent as an adult (Havemen and Wolfe, 1995; McLanahan, 1985; Ratcliffe, 1995). Growing up in a welfare-dependent family may also have a detrimental impact on young children's test scores (Hill and O'Neill, 1994).[15] On the other hand, relative to other *poor* children, children who live in families who receive AFDC do not fare differently in terms of health, school performance, or behavioral problems in school (Zill et al., 1995). Being tied to the welfare system may extract other benefits, such as increased access and information about health insurance coverage. Although increases in welfare income because of MFIP are tied to employment, this research implies that increases in income from welfare may have a different effect than increases in income from earnings.

V. Key Questions

The effects of MFIP on child outcomes will inform state policymakers as they consider different welfare-to-work programs. To some extent, the findings in this report will inform what effects MFIP-S may have on family and child well-being. Policy implications will be discussed in Chapter 6. First, this report will seek to answer the following key questions:

[14]See Lamb (1998) for a review.

[15]Peters and Mullis (1997), controlling for omitted variable bias, found that receiving welfare has a detrimental impact on years of work experience. In contrast to welfare income, child support income has a beneficial impact beyond the effects of income for children growing up in single-parent families (Knox and Bane, 1994). See Mayer (1997) for a discussion about the effects of different sources of income.

- What are the effects of MFIP on the employment behavior of single mothers with preschool or school-age children?
- What are the effects of MFIP on intermediate outcomes, such as children's home environment, experiences in child care and structured out-of-school activities, and characteristics of the neighborhood? What are the effects of MFIP on maternal depression, on a child's likelihood of living in a two-parent family, or on a mother's experience with domestic abuse?
- What are the effects of MFIP on different domains of child outcomes — including behavior, school functioning, and health?
- How do a child's characteristics — such as age and gender — influence MFIP's effects on child outcomes?
- How do a family's characteristics — such as length of time on welfare, previous work history, and education — influence MFIP's effects on child outcomes? In particular, how does MFIP affect children in families who are most at risk of detrimental outcomes?
- What are the effects on child outcomes of providing financial incentives alone, compared with adding mandatory employment services to financial incentives?
- Do the effects of MFIP on child outcomes occur through its effects on parents' employment, family income, or both?

Volume 1 evaluates MFIP's effects on recipients in urban and rural counties. This volume focuses on recipients in urban counties. Findings from Volume 1 show that MFIP's combination of mandatory services and financial incentives substantially increased employment and earnings up to three years after random assignment for long-term recipients in urban areas (Miller et al., 2000). By the last nine months of follow-up, MFIP significantly increased their quarterly employment by 13 percentage points — a 26 percent increase over single parents on AFDC. During this same follow-up period, MFIP significantly increased long-term recipients' average quarterly earnings and income from benefits and earnings, and it significantly reduced the likelihood (by 12 percent) that earnings and welfare benefits left a family in poverty. MFIP's impacts on urban long-term recipients are large; that is, they are above average compared with the effects on employment and income observed in similar welfare and employment intervention programs. For urban recent applicants, MFIP had modest to no effects on employment and earnings, but it did reduce poverty (as measured by the total of earnings and welfare income). For both urban long-term recipients and urban recent applicants, MFIP's financial incentives contributed substantially to the reduction of poverty.

The impacts on adult employment and total family income in this volume will be evaluated for a subset of the urban evaluation sample. Thus, if families in the subsample behaved similarly, MFIP may affect child outcomes via its effects on employment behavior, income, and poverty. Encouraging work, reducing dependence on public assistance, and reducing poverty have been difficult to achieve in the past. Well-run employment and training programs have increased employment and earnings but have not consistently raised family income, because welfare grants decline as earnings increase. Strategies to raise

income by increasing benefits run the risk of being very expensive unless they are carefully designed to encourage employment as well. As an antipoverty program with potentially large impacts on employment and total family income, MFIP may provide one model for improving the well-being of families and children. This report will assess whether or not these impacts on family income were realized for the MFIP child study sample (single-mother families with children 2 to 9 years old) and whether MFIP had any direct effects on measures of children's well-being. With the exception of recent emerging findings as previously reviewed, relatively little is known about the effects of antipoverty programs on child outcomes, particularly of policies that convey the current U.S. welfare environment.

VI. The Economic and Policy Contexts of the MFIP Evaluation

The economic and policy environments that existed in Minnesota during the MFIP evaluation are important in interpreting the program's effects. In addition, the state of the economy during the evaluation period may affect whether or not the results can be generalized to other locations or other time periods. Figure 1.3 presents a time line of this evaluation and the institution of key policies in Minnesota. The figure illustrates two important changes. First, throughout the field trials, both the MFIP and the STRIDE programs gradually moved toward a stronger emphasis on work rather than education or training. In July 1995, rules for participation in STRIDE changed; participants could be sanctioned for failing to follow through on their "self-sufficiency" plan, and those who were enrolled in part-time education or training programs were required to spend a specified number of hours per week in paid employment, work study, or volunteer activities.

Second, given the considerable public discussion about the transition from the state's existing welfare system to statewide MFIP (MFIP-S, which includes time limits and stronger work requirements), families in the evaluation may have gotten confused over time about which rules applied to them.

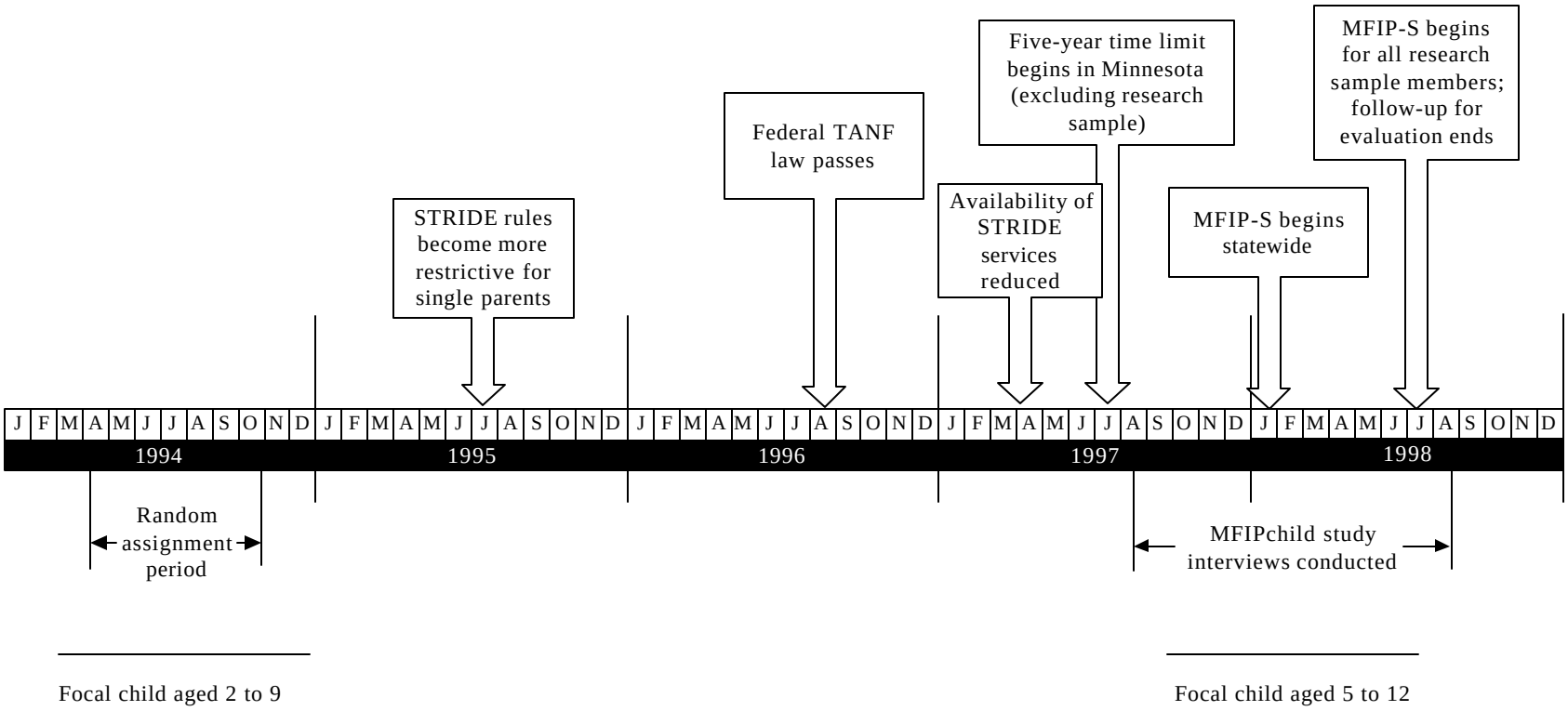
Some key features of MFIP-S include:

- A 60-month lifetime limit on welfare receipt
- A requirement that single parents either work 35 hours per week or participate in job search 30 hours per week
- A time trigger for the work requirement that applies within six months of a single-parent family's entry into public assistance
- A base grant and financial incentives that allow recipients to remain on welfare until their earnings reach 120 percent of the poverty line

The changes to Minnesota's public assistance system that resulted from the statewide MFIP plan were phased in from mid-1997 to mid-1998. The key changes were a phase-out of the STRIDE program starting in March 1997, a five-year time limit beginning in July 1997, and conversion of all welfare recipients to MFIP-S from January to March 1998. The field trial members

Figure 1.3

Time Line of Welfare Reform and MFIP Child Study Evaluation Milestones



NOTE: The earned income disregard was also increased for all AFDC recipients in Minnesota (outside the MFIP research sample).

were converted to MFIP-S after the rest of the state caseload because Minnesota's Department of Human Services was committed to keeping the basic differences in treatment between the program and control groups intact until the evaluation follow-up was completed in mid-1998. Although members of the research sample were informed about their temporary exemption from major policy changes, staff began to advise MFIP and AFDC clients that changes would affect them as early as mid-1997. As discussed in Volume 1, however, data on families' perceptions of program rules suggest that these changes did not undermine the validity of the research design (Miller et al., 2000).

The biggest policy changes in the new program were aimed at reducing costs and increasing the urgency of the employment message. These include the five-year time limit, the reduced basic grant, the reduced earnings threshold for leaving welfare, the more immediate participation mandate, tighter sanctions, and the increased orientation toward full-time work. In addition to reducing costs, however, these changes may reduce MFIP's most direct income-enhancing effects and may increase its employment impacts, particularly for recent applicants to welfare. It is difficult to gauge how these changes will influence any nonfinancial effects MFIP has on family and child well-being.

Three other aspects of the policy and economic environment are important. First, the federal Earned Income Credit (EIC) for low-income workers was expanded during the years that MFIP was being evaluated, and these changes likely affected families' decisions about employment. The maximum federal EIC for a single-parent family with two children was $2,528 in 1994, and it rose to $3,656 by 1997 (U.S. House of Representatives, 1998). Moreover, the state of Minnesota had its own EIC, which was calculated as 15 percent of the federal credit. The state of Minnesota also supports working-poor families through a number of additional programs operating outside the welfare system. For example, Minnesota operates a health insurance program for poor and near-poor families, resulting in only 9.2 percent of individuals' lacking insurance, the fourth-lowest uninsured rate in the country (Burt, Green, and Duke, 1997; Coughlin, Rajan, Zuckerman, and Marsteller, 1997). The state has also invested considerably in child care, increasing funding for non-Head Start child care from $24 million in 1995 to a projected $41 million in 1997 (Burt, Green, and Duke, 1997). Nearly all of this increase represents an expansion of Basic Sliding Fee child care for the nonwelfare poor. Thus, any positive effects of the MFIP program should be interpreted as effects that were achieved over and above any impacts of the EIC and Minnesota's set of supports for working-poor families.

Second, Minnesota's economy was very strong during the evaluation period, with unemployment rates at about 4 percent in 1994 and falling to 2.5 percent by 1998 (U.S. Department of Labor, 1999). A strong local economy will make it easier both for the control group to find employment and for the program group to gain employment. The impacts on employment and earnings produced in Minnesota's strong economy may be larger than they would have been if unemployment rates had been higher.

Third, Minnesota was a relatively high-grant state: The maximum welfare grant for a family of three in January 1994 was $532, compared with $366 nationally (U.S. House of Representatives, 1998). Because of these relatively high grants, even Minnesota's AFDC program had a high proportion of recipients who mixed work and welfare. The relatively high rate of employment within the caseload could make it more difficult for the program to increase employment rates. The Minnesota welfare system also had never instituted a mandatory employment and training program for single parents prior to implementing MFIP. Thus, the population who entered the field trials had not faced a strong expectation

of work in the past, and they may have reacted differently to the program than would a group composed of families who were still on welfare after having previously faced strong expectations about work. Finally, during the field trials, Minnesota's welfare caseload declined considerably: From 1994 to 1998, the caseload fell by 23 percent (U.S. Department of Health and Human Services, 1999). The population who would be subject to an MFIP program after the field trials years would likely have a different demographic composition, presumably with more intractable barriers to work, than the composition of the research sample for the field trials.

VII. Organization of This Report

Chapter 2 begins with descriptions of the evaluation sample and the analysis sample for this report, including their characteristics. Next, data sources are discussed, highlighting the types of detailed information that were collected about family well-being and child outcomes. The chapter explains in greater detail why this report focuses primarily on families in urban counties.

Chapter 3 presents MFIP's impacts on family and child well-being for long-term recipients in urban counties. Only impacts from the full MFIP program are presented. The chapter begins by presenting MFIP's impacts on employment, earnings, income, and resources and then presents MFIP's impacts on the families' and children's environments, family functioning, and child outcomes. The chapter ends by discussing MFIP's impacts on selected subgroups: preschool-age children compared with school-age children, girls compared with boys, white children compared with black children and others, and more disadvantaged families compared with less disadvantaged families.

Chapter 4 presents impacts that decompose MFIP's two major components: financial incentives and the added effect of mandatory employment-related services. This chapter includes a discussion of how the decomposition of MFIP may untangle the separate effects on child outcomes of mothers' increased income and increased employment.

Chapter 5 examines MFIP's impacts on children of recent applicants in urban counties by presenting a subset of the impacts previously examined for children of urban long-term recipients. A major portion of this chapter is dedicated to understanding why MFIP had such different effects on recent applicants and their children compared with long-term recipients and their children.

Finally, Chapter 6 places the findings about MFIP's effects on child outcomes into a broader policy context. The first section converts MFIP's findings into effect sizes, which are used to discuss the magnitude of MFIP's impacts on child outcomes relative to other, comparable studies. The second section compares the outcomes for children in the MFIP analysis sample with relevant measures of outcomes for poor and total populations of children in Minnesota and in the United States, thus contributing to emerging descriptive analyses portraying the well-being of poor children. The third section discusses the policy significance of MFIP's impacts on such intermediate outcomes as marriage, maternal depression, and domestic abuse and provides illustrative questions for future research. The chapter ends with a brief summary of lessons from MFIP about welfare reform and their implications for current and future policy.

Chapter 2

Data Sources and Samples

I. The Evaluation Sample

As part of the larger evaluation of the Minnesota Family Investment Program (MFIP), a survey was administered three years after program entry to a subset of the evaluation sample — a random subset of families who entered the program between April 1994 and October 1994. The complete survey consists of two sections: the core section and the child section. The child section was administered to a subset of families randomly assigned from April 1994 to October 1994.

Although the child section of the survey provides information on aspects of the home environment and family functioning that could affect all children in the household, many of the survey items, such as the questions on behavior, are child specific. To reduce the interview burden of answering these questions about each child in the household, mothers were instead asked these questions about one particular child, referred to as the "focal child."[16]

The evaluation sample includes only those families with at least one child between ages 2 and 9 at the time of random assignment (or between ages 5 and 12 at the time of the interview). This child was selected as the focal child, who had to be a legal child of the respondent and had to have lived with her at some time during the past three months and for at least two days in the past week. If the family had more than one eligible child, then one was randomly selected to be the focal child. These families were administered the complete survey, both the core and the child sections. Families without a child in the specified age range (2 to 9 at random assignment) completed only the core section.

There are several advantages to focusing on children who were between ages 2 and 9 at the time of random assignment. This age range covers two periods of childhood (preschool- and school-age years) that are likely to be responsive to changes in the family environment. Recent research has found, for example, that the level of family income has a relatively stronger effect on the development of young children (Duncan and Brooks-Gunn, 1997). Also, in terms of measuring children's well-being, many psychometrically reliable and well-tested instruments are available for children in this age range. Finally, any detrimental effects of poverty may be most reversible during children's young years, because children have not yet spent the majority of their life in poverty.

There are also a number of drawbacks to focusing on children who were between ages 2 and 9 at the time of random assignment. First, MFIP's effects on infants and toddlers are not adequately assessed, and it is infants and toddlers who may be most affected by maternal employment and by child care. Second, MFIP's effects on adolescents are not adequately assessed. Adolescents may benefit the

[16]In the core section of the survey, selected outcomes about children's academic functioning were collected for each child age 5 to 18 of all respondents in the MFIP evaluation. These outcomes are presented and discussed in Appendix E.

most from the role-modeling of a working mother or may be most at risk of delinquent behavior if maternal employment leads to less supervision.

A. Subgroups of the Evaluation Sample

To best describe the effects of MFIP on child outcomes, this report highlights the subgroup of respondents who experienced the largest changes in behavior because of MFIP. Findings from Volume 1 suggest that MFIP had the largest and continually consistent impacts on urban long-term recipients (Miller et al., 2000). This report of the child study focuses on MFIP's impacts on children in two different types of welfare families in urban counties. A major portion of the report discusses MFIP's impacts on urban long-term recipients, which are then compared with impacts on recent applicants, or single parents on welfare for fewer than 24 of the past 36 months. These research groups are discussed in further detail below.

Children of Long-Term Recipients Versus Recent Applicants. MFIP's effects are presented separately for two types of single parents receiving welfare. *Long-term recipients* are defined as those families who had been receiving welfare for two years or more of the past three years when they entered the program. *Recent applicants* are defined as those families who either (1) were applying for welfare for the first time when they entered the program or (2) had been receiving welfare for less than two years. The primary reason for dividing the sample in this manner is that MFIP's mandatory employment-related activities were not required until single parents reached two years of welfare receipt. Thus, this study's long-term recipients were required to participate in services immediately after entering MFIP and, consequently, received the MFIP treatment for the entire follow-up period. In contrast, many single parents in the recent applicant group were applying for welfare for the first time when they entered MFIP and would not be subject to the participation requirement for at least two years. The remainder of the recent applicants had been on welfare for less than two years and would face the participation requirement at any point within 23 months after entering the program. The second reason for dividing the sample in this manner is that the families of long-term recipients and recent applicants have very different baseline characteristics, which will be discussed in Section IV.

By presenting separate results for long-term recipients and recent applicants, the evaluation assesses the effectiveness of MFIP from two perspectives. The results for long-term recipients are important because they provide an opportunity to examine the effects of MFIP's full treatment — incentives plus mandatory services — without waiting several years for a new applicant group to reach the time trigger for mandated participation. The results for the recent applicant group are important because they provide a snapshot of how MFIP will affect future entrants into the welfare system (who have not been affected by prior welfare rules). However, for most of the follow-up period, recent applicants in the MFIP field trials received only MFIP's financial incentives. Finally, from a policy perspective, long-term recipients have proven least likely to gain employment and leave the welfare system without some intervention. Thus, at any point in time, the bulk of welfare recipients are long-term recipients, and expenditures on those recipients represent the majority of welfare costs. For this reason, the MFIP model was designed to intervene most intensively for long-term recipients, and the results for long-term recipients are of particular interest.

Children in Urban Counties Versus Rural Counties. The research design of the MFIP evaluation comprises seven counties — three urban (including Hennepin County, the location of Minneapolis and St. Paul) and four rural. Long-term recipients and recent applicants were randomly assigned to different research groups depending on whether they lived in a rural or an urban county. Respondents in *urban counties* in the MFIP evaluation were randomly assigned to one of three research groups: MFIP, MFIP Incentives Only, or AFDC. Respondents in *rural counties* in the MFIP evaluation were randomly assigned to one of only two research groups: MFIP or AFDC. The effects of MFIP on families in urban counties are the focus of this report for three reasons: (1) MFIP's impacts on employment and income are larger, more consistent, and longer-lasting for families in urban counties (Miller et al., 2000); (2) the sample size for single-parent families in rural counties is quite small; and (3) the three-group research design is available only in urban counties. Each of these reasons is discussed further below.

First, because this report focuses on outcomes that are not primary targets of MFIP, it is of particular interest to focus on a group of families who experienced MFIP's impacts on employment, earnings, and income consistently over time. In this regard, MFIP's impacts on families in urban counties are noteworthy.

Second, although the variation in the effects of MFIP in rural and urban counties may be of interest in linking maternal behavior to child outcomes, the total sample size available for rural counties is relatively small and thus may produce unreliable or unrepresentative impact estimates. A discussion of MFIP's impacts on outcomes for children in all counties and in rural counties is included in Appendix D.

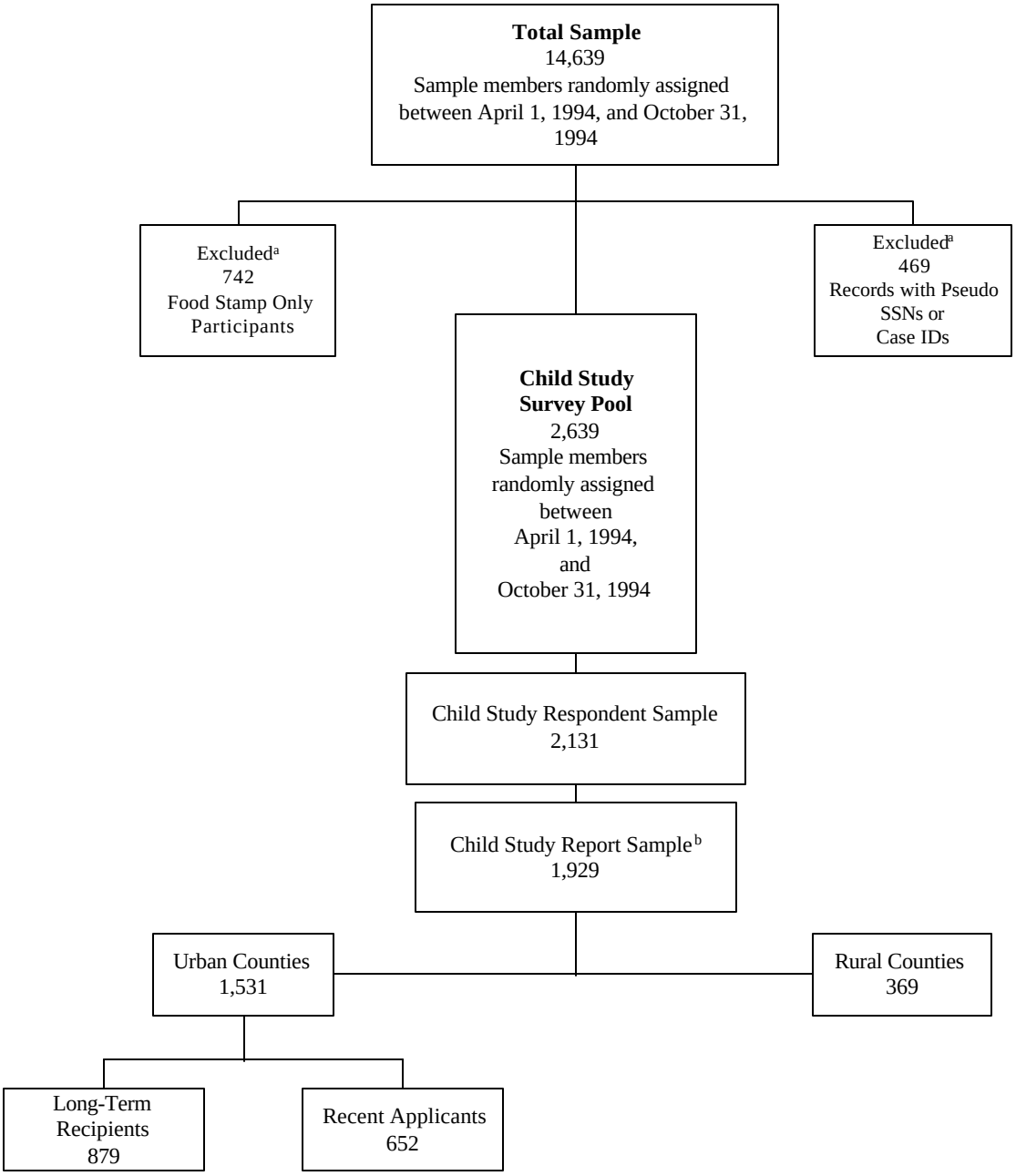
Third, MFIP's three-group research design in urban counties offers a unique opportunity to learn more about how the MFIP treatments may affect child outcomes. MFIP's financial incentives may have different effects on employment and income compared with the joint effects of financial incentives and mandatory services. Distinguishing the separate components of the MFIP program as they affected employment and income may help determine how MFIP's effects on income and employment in turn affected intermediate outcomes (such as child care) and child outcomes. Thus, the three-group research design in urban counties may be used to untangle the effects of income on child outcomes from the effects of employment.

II. The Analysis Sample

Figure 2.1 illustrates the derivation of the final analysis sample for the child study and how it is a subset of the sample used for the main MFIP evaluation. The sample targeted for the child section part of the survey consists of all families who entered the program between April 1994 and October 1994 and who had a child between the ages of 2 and 9 at the time of random assignment. The survey achieved a response rate of 80.3 percent; that is, interviewers managed to locate and interview 2,131 of the 2,639 eligible families. Although this is a reasonably high response rate, there is the possibility that analyses using the survey sample will suffer from nonresponse bias. Nonresponse bias arises when the respondents differ from the nonrespondents in important ways, casting doubt on whether the survey sample is representative of the larger population. Appendix B presents an analysis of nonresponse bias. The results suggest that any bias is minimal; that is, the survey sample is representative of the full sample of eligible families.

Figure 2.1

Derivation of the Child Study Report Sample



NOTE: [a]To facilitate discussions regarding the sample sizes indicated in tables included throughout this report, this diagram depicts the Food Stamp Only and the Pseudo SSN cases as having been removed from the total sample. It should be noted, however, that these cases were actually included in the report and survey samples but are excluded from the impact and survey data analyses.

[b]Twenty-nine respondents were excluded from the analysis because information was missing about whether or not they hit the MFIP "time trigger" and thus were required to participate in employment-related services.

Near the bottom of Figure 2.1, the final analysis sample of 1,900 families is obtained after imposing a few additional restrictions. First, the analysis is limited to children who were at least 5 years old and less than 13 years old at the time of the interview. Some children who were interviewed were out of the age range for the analysis because the interview took place earlier or later than anticipated relative to their birth date. Second, because the focal child in each household was chosen before the interview, based on the family's status at random assignment, some "predetermined" focal children were not in the household at the time of the survey, either because they had moved to another residence or because the designation at random assignment was based on incorrect information. For these cases, another focal child was randomly chosen at the time of the interview. The final analysis excludes children who were not the predetermined focal child.

II. Data Sources

A. Baseline Characteristics

For all sample members, basic demographic information is available from a Baseline Information Form (BIF) completed just prior to random assignment. Staff in the financial offices interviewed each welfare applicant or recipient and collected important demographic information, such as the sample member's age, educational attainment, prior work history, and prior welfare receipt. Most research group members also completed a confidential Private Opinion Survey (POS).[17] This brief survey asked respondents about their attitudes, opinions, and preferences regarding work and welfare — providing a rich picture of their perspectives as they entered the program.

These background data are used for three purposes: to describe the sample, to define subgroups of the sample whose impacts may be of particular interest, and to contribute to the regression model used in the impact analyses to increase the precision of impact estimates.

B. Administrative Records

Data from state administrative records were used to track families' benefit receipt and employment during the follow-up period. *Public assistance benefits records* were provided to MDRC by Minnesota's Department of Human Services. These automated data include monthly information on public assistance benefits (including MFIP, AFDC, Food Stamps, and Family General Assistance) provided to each member of the research sample. *Unemployment Insurance (UI) earnings records* were provided to MDRC by Minnesota's Department of Economic Security. These data provide quarterly earnings information for each sample member, as reported to the UI system by employers; the data exclude earnings that are not covered by or not reported to the UI system — for example, jobs in the informal economy. Earnings and benefit data are available for each sample member for a minimum of one year prior to random assignment and three years following random assignment.

[17] Approximately 71.5 percent of the respondents who completed the Baseline Information Form also completed the Private Opinion Survey.

C. 36-Month Client Survey

The core section of the 36-month client survey took approximately 30 minutes to administer and focuses primarily on adult and family-level outcomes. It is designed, for example, to obtain employment information not available from administrative records (such as hours worked and wage rates) plus more general measures of family circumstances (such as household composition, sources of income, and material hardship). The child section of the survey took 45 minutes to administer and contains a range of questions designed to measure children's environments and a number of child outcomes.

Although it is focused on adult outcomes, the core section of the survey provides information about the following important aspects of the child's environment:

Maternal Employment. The survey collected information about the wages and hours worked for each job the mother had held since random assignment. Start and end dates provide information about job stability.

Family Resources and Hardship. The survey obtained information both about the total income received by the family in the month prior to the survey and about the sources of income. In addition, several questions captured the extent to which the family had experienced material hardship, such as periods of time when the family could not pay bills or get needed health care.

Health Insurance and Food Security. In the survey, respondents were asked about health insurance coverage, about which members in the family were covered by public or by private health insurance, and about whether the family and children had had enough to eat.

Family Stability and Family Structure. Family stability was measured using questions about the number of times the family had moved since random assignment; whether the focal child had ever spent time away from the mother; and changes in family composition, such as marriage or divorce.

Children's School Progress. Mothers were asked selective questions about children's functioning in school, relating to such areas as academic performance, grade repetition, and behavioral problems.

The following broad areas are covered by the child section of the survey:

Home Environment. The survey contains a widely used set of questions that has been found to capture the quality of children's home environment. The questions capture such aspects as the stability of home life, the amount of cognitive stimulation provided, and the level of emotional support. In addition, another aspect of the home environment was captured with a series of questions about domestic and family abuse of the mother.

Child Care. The survey attempts to measure the quality and stability of child care use since random assignment. For example, mothers were asked about the type of care used, the number of different arrangements used, and their perceptions about the quality of care used.

Maternal Well-Being. Mothers' well-being was measured by a widely used and reliable set of questions designed to assess depression.

Parenting Practices. Parenting practices were measured using several questions that asked mothers about the stress of parenting, the level of supervision provided, and the use of harsh discipline.

Children's Social and Emotional Adjustment. The survey uses two well-known scales to measure children's emotional well-being and behavior. The Behavioral Problems Index (BPI) measures the extent of children's problem behaviors, and the Positive Behavior Scale (PBS) is designed to capture positive aspects of children's behavior.

Children's School Progress. In addition to the questions about school progress asked in the core section of the survey, mothers were asked about academic honors received by their children, the use of special education resources, and whether the children had ever been expelled or suspended or had ever dropped out of school.

Children's Health and Safety. Children's health and safety were measured using several questions. For example, mothers were asked to rate their children's health, to describe the use of preventive care for their children, and to summarize the incidence of accidents and injuries.

Many questions on the survey collect information about fairly sensitive topics, and respondents might be reluctant to respond truthfully or to respond at all. Domestic abuse is one good example. For this reason, much of the child section of the interview was conducted using Audio-CASI (Computer Assisted Self-Interviewing), in which respondents listen to questions through headphones and enter their responses directly into a computer. This method has proved to be more effective than other methods at eliciting responses to sensitive questions (see Gallup-Black, 1999, for a review and a discussion of the use of Audio-CASI in the MFIP evaluation).

One disadvantage of using the Audio-CASI method is that information about sensitive items will be missing for families whose interviews are conducted not in their home but rather over the phone. Survey items that were measured using Audio-CASI are missing for approximately 10 percent of the 1,900 families in the child study report sample. In general, there are few differences in the demographic and economic characteristics of families who answered all the Audio-CASI items and families who did not.[18]

IV. Description of the Report Sample

This section describes the characteristics of the report sample, using data from the Baseline Information Form and the Private Opinion Survey, and it compares the characteristics of long-term recipients and recent applicants. Because it is also of interest to compare the characteristics of this MFIP

[18]Long-term recipients in both the program and the control groups were equally likely to complete the Audio-CASI items in the survey. Recent applicants in the program group were more likely than control group members to complete the Audio-CASI items. To ensure that the impacts measured by the Audio-CASI items were not biased by the different response rates, impacts were reanalyzed for recent applicant families who completed the entire survey, that is, who provided complete information on Audio-CASI items and non-Audio-CASI items. MFIP's impacts for these families were similar to impacts for the full sample of recent applicant families.

sample with the characteristics of representative families in Minnesota and the United States as a whole, Chapter 6 compares selective outcomes for MFIP, state, and national samples.

A. Baseline Demographic Characteristics

Table 2.1 presents baseline demographic characteristics of long-term recipient families and recent applicant families in urban counties.[19] The table begins by showing characteristics of the focal child in each of the samples. Roughly two-thirds of the focal children were younger than 6 years old at the time of random assignment. The focal children are equally split between being male or female and equally split between being firstborn or later in the birth order.

The remaining panels of the table present the two samples' demographic characteristics and their status regarding marriage, employment, education, and welfare receipt. About 46 percent of long-term recipients are white, non-Hispanic; and 41 percent are black, non-Hispanic. Long-term recipients are more likely to be black than recent applicants are (41 percent compared with 28 percent). Over 71 percent of long-term recipients were never married at the time of random assignment — considerably more than recent applicants (38 percent). In contrast, 35 percent of recent applicants were married but living apart from their spouses, and 21 percent were divorced.

Unsurprisingly, long-term recipients are more disadvantaged in terms of their employment and welfare history. Nearly 12 percent of long-term recipients had never worked at the time of random assignment, compared with only 4 percent of recent applicants. Nearly one-third of long-term recipients had any earnings in the 12 months prior to random assignment, compared with over two-thirds of recent applicants. More than half of long-term recipients were on welfare for five years or more, compared with approximately 10 percent of recent applicants. Finally, although long-term recipients and recent applicants completed a similar level of education (11.5 and 12.1 grades, respectively), nearly one-third of long-term recipients did not have a high school diploma or its equivalent or any education beyond high school. In comparison, 18 percent of recent applicants did not have a high school diploma or its equivalent or any education beyond high school..

B. Opinions and Attitudes

Table 2.2 presents opinions and attitudes of long-term recipient families and recent applicant families in urban counties. These characteristics are based on information reported on the confidential Private Opinion Survey completed just prior to random assignment. Although sample members reported a number of barriers to employment, arranging for child care was the most

[19]This study's long-term recipients (those with at least one child age 2 to 9 at the time of random assignment) generally have similar baseline characteristics, particularly in terms of employment and welfare history, compared with long-term recipients in the full evaluation sample in Volume 1. The only exceptions are that long-term recipients in this study are more likely to be black and never to have married. This study's recent applicants also generally have similar baseline characteristics as recent applicants in the full evaluation sample in Volume 1. The only exceptions are that recent applicants in this study are more likely to be separated or divorced and more likely to have had some prior experience on welfare compared with recent applicants in Volume 1.

Table 2.1

Selected Characteristics of MFIP Child Study Report Sample Members in Urban Counties, by Welfare Status at Random Assignment

Characteristic	Long-Term Recipients	Recent Applicants
Focal child characteristics		
Younger than 6 at random assignment (%)	66.0	62.7
6 or older at random assignment (%)	34.0	37.3
Average age at random assignment (%)	5.2	5.2
Male (%)	50.8	48.5
Female (%)	49.2	51.5
Child is firstborn (%)	49.3	53.8
Demographic characteristics		
Geographic area (%)		
Hennepin County (Minneapolis)	78.2	63.2
Anoka and Dakota Counties	21.8	36.8
Average age (years)	28.9	30.1
Race/ethnicity (%)		
White, non-Hispanic	46.4	63.5
Black, non-Hispanic	40.9	27.9
Hispanic	2.2	2.2
Native American/Alaskan Native	8.8	5.3
Asian/Pacific Islander	1.7	1.2
Family status		
Marital status (%)		
Never married	71.4	38.0
Married, living with spouse	0.5	0.6
Married, living apart	7.8	34.6
Separated	1.6	4.6
Divorced	18.1	21.4
Widowed	0.7	0.8
Respondent pregnant or has a child under 6 at the time of random assignment	78.4	74.2
Labor force status		
Any earnings in past 12 months (%)	30.9	70.3
Currently employed (%)	12.8	22.3
Average hourly wage[a] ($)	6.14	6.60
Average hours worked per week[b] (%)		
1-19	41.9	32.9
20-29	30.5	29.3
30 or more	27.6	37.9

(continued)

Table 2.1 (continued)

Characteristic	Long-Term Recipients	Recent Applicants
Never worked (%)	11.6	4.4
Education status		
Highest credential earned (%)		
GED certificate[c]	17.5	12.4
High school diploma	40.2	51.1
Technical/2-year college degree	11.2	14.4
4-year college degree or higher	0.9	4.5
None of the above	30.1	17.6
Highest grade completed in school (average)	11.5	12.1
Prior welfare receipt		
Total prior AFDC receipt[d] (%)		
None	1.6	43.1
Less than 4 months	0.9	4.2
4 months or more but less than 1 year	0.5	11.2
1 year or more but less than 2 years	1.9	18.0
2 years or more but less than 5 years	43.0	14.0
5 years or more but less than 10 years	36.2	6.1
10 years or more	16.0	3.6
Current and recent education and training activities		
Currently enrolled in any type of education or training (%)	25.9	16.8
Enrolled in any type of education or training during the previous 12 months (%)	28.3	20.2
Sample size (total = 1,531)	879	652

SOURCE: MDRC calculations using data from Background Information Forms.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment. All sample members are female.

One percent of single-parent sample members did not complete a Background Information Form. In addition, nonresponse rates for individual items ranged from 0 to 8.3 percent.

[a]Percentages are calculated for those employed at the time of random assignment who reported an hourly wage. Twenty percent of those employed were excluded because they did not report an hourly wage.

[b]Percentages are calculated for those employed at the time of random assignment.

[c]The General Educational Development (GED) certificate is given to those who pass the GED test and is intended to depict knowledge of basic high school subjects.

[d]This refers to the total number of months an individual or her spouse has spent on AFDC at one or more periods of time as an adult. It does not include AFDC receipt under a parent's name.

Table 2.2

Attitudes and Opinions of MFIP Child Study Report Sample Members in Urban Counties, by Welfare Status at Random Assignment

Attitude or Opinion	Long-Term Recipients	Recent Applicants
Client-reported barriers to employment		
Among those not currently employed, the percentage who agreed or agreed a lot that they could not work part time right now for the following reasons:[a]		
No way to get there every day	48.4	32.3
Cannot arrange for child care	63.3	57.6
A health or emotional problem, or a family member with a health or emotional problem	22.9	30.2
Too many family problems	23.3	36.5
Already have too much to do during the day	23.8	24.2
Any of the above	82.6	75.4
Client-reported preferred activities		
Given the following choices, percentage expressing a consistent preference for one of the following activities:[b]		
Staying home to take care of family	9.0	10.9
Going to school to learn a job skill	41.8	47.7
Going to school to study basic reading and math	4.8	3.9
Getting a part-time job	8.1	5.3
Getting a full-time job	29.9	27.6
Percentage who agreed or agreed a lot that children who go to daycare or preschool learn more than children who stay home with their mothers	57.7	54.8
Percentage who, if they had a choice, would prefer to work at a:[a]		
Part-time job	31.7	32.2
Full-time job	68.3	67.8
Client-reported attitudes toward welfare		
Percentage who agreed or agreed a lot with the following statements:		
I feel that people look down on me for being on welfare	64.4	59.5
I am ashamed to admit to people that I am on welfare	56.2	59.8
Right now, being on welfare provides for my family better than I could by working	60.0	51.5
I think it is better for my family that I stay on welfare than work at a job	19.5	16.8

(continued)

Table 2.2 (continued)

Attitude or Opinion	Long-Term Recipients	Recent Applicants
Client-reported social support network		
Percentage who agreed or agreed a lot with the following statements:		
Among my family, friends, and neighbors, I am one of the only people who is on welfare	35.4	51.5
When I have trouble or need help, I have someone to talk to	75.2	80.4
Client-reported sense of efficacy		
Percentage who agreed or agreed a lot with the following statements:		
I have little control over the things that happen to me	19.2	21.1
I often feel angry that people like me never have a chance to succeed	50.1	34.4
Sometimes I feel that I'm being pushed around in life	41.5	44.8
There is little I can do to change many of the important things in my life	31.3	30.6
All of the above	7.5	8.4
None of the above	30.3	35.3
Sample size (total = 1,531)	879	652

SOURCE: MDRC calculations using data from Private Opinion Survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

Thirty percent of single-parent sample members for this report did not fill out a Private Opinion Survey because the survey began in the second month after the start of random assignment.

In most categories, individuals could agree or agree a lot with more than one statement. Multiple responses were not possible in the following item groupings: client-reported preferred activities, client-reported employment-related activities, and client-reported acceptable wages.

[a]Part time is defined as a minimum of 10 hours per week. Full time is defined as 40 hours per week.

[b]Percentages were calculated for those with a consistent preference.

frequently cited barrier. Of those who were not currently employed, 83 percent of long-term recipients and 75 percent of recent applicants reported that they faced at least one of five barriers to part-time employment. Nearly half of long-term recipients reported that lack of transportation was a barrier. Recent applicants were more likely than long-term recipients to report problems relating to health or other family problems.

Preferred activities reported by the clients were surprisingly similar among long-term recipients and recent applicants. Over 70 percent of long-term recipients and 75 percent of recent applicants expressed a consistent preference either for going to school to learn a job skill or for getting a full-time job. This is consistent with client-reported attitudes toward welfare. The majority of long-term recipients and recent applicants agreed that people looked down on them for being on welfare and that they were ashamed to admit being on welfare, yet they also agreed that welfare provided for their family better than working. However, compared with long-term recipients, a greater proportion of recent applicants expressed a preference for going to school to learn a job skill, and fewer recent applicants were less likely to agree that being on welfare provided for their family better than working. Although clients reported a preference to work or gain the skills to be able to work, they saw welfare as the best option for providing for their family.

The last two panels in Table 2.2 measure clients' social support networks and their sense of efficacy. Of long-term recipients, 75 percent agreed that they had someone to talk to when they needed help, and the majority knew others who were on welfare. Nearly 70 percent of long-term recipients also agreed with statements about having little control over events, feeling angry that they never had a chance to succeed, feeling that they were pushed around in life, and feeling that they could do little to change important things in their life. Although a similar proportion of recent applicants agreed that they had someone to talk to when they needed help, they were much more likely than long-term recipients to agree that they did not know of family, friends, or neighbors who were on welfare. These descriptions imply that both long-term recipients and recent applicants felt that they had little control over their future, which may have affected their ability to respond to MFIP's participation mandate and financial incentives. Another interpretation is that MFIP's mandate may have provided the kind of structure that clients needed to begin employment.

V. Measuring the Effects of MFIP on Child Outcomes

Because families were assigned at random to either the MFIP or the AFDC group, there should have been no systematic difference between the groups when they entered the program. During the follow-up period, any differences in the two groups' outcomes — such as family income or children's well-being — can reliably be attributed to MFIP. The difference in outcomes between the two groups is the effect, or "impact," of MFIP. All the impact estimates are regression-adjusted; that is, to increase the precision of the estimates, impacts are estimated in a regression framework, controlling for a number of baseline characteristics.[20]

[20]These baseline characteristics include indicators for county, receipt of public assistance at the time of random assignment, ever on AFDC, on public assistance for five years or more, number of children, presence of child under the age of 6, never married, no high school diploma or other degree, employed at random assignment, race/ethnicity, age 25 to 34, age 35 or older, employed in quarter prior to random assignment, total earnings in year prior to random assignment, total earnings in year prior to random assignment squared, welfare receipt in quarter prior to random assignment, welfare receipt in year prior to random assignment, total months of welfare receipt in year prior to random (continued)

All impacts are tested for statistical significance, and only those impacts that are statistically significant using a two-tailed t-test at the 10 percent level are deemed program impacts. Significance tests are based on the fact that some estimated impacts, or differences between the groups, may arise solely by chance or random variation. Impacts that are statistically significant can be thought of, with a reasonable degree of confidence, as representing a true difference between the groups, rather than a difference arising by chance.

A number of hurdles may exist in detecting significant effects of MFIP on child outcomes. First, as previously discussed, because MFIP is a program targeted toward affecting the behavior and outcomes of adults, the program may be more likely to affect children if large and significant effects are found on adult outcomes. This is particularly true for the MFIP Incentives Only group, for whom entry into employment and sustaining employment are voluntary. Second, MFIP's effects may be detectable only on specific aspects of measured child outcomes, and the data may not adequately capture these specific aspects. For example, short-term effects of income on measures of children's behavior are likely more detectable than short-term effects of income on broad measures of children's health.

Third, all the child outcome measures are based on maternal reports, yet mothers' perceptions of their children may also be affected by MFIP or may differ from objective assessments. Thus, maternal reports of child well-being may provide only one snapshot of MFIP's effects on children. The New Chance and New Hope evaluations found that mothers' reports of children's behavior and academic performance differed from teachers' reports. In the New Chance Demonstration, maternal reports suggested that the program negatively affected children's behavior and academic performance, whereas teachers' reports suggested no significant differences between children in the program and control groups (Quint, Bos, and Polit, 1997). In the New Hope Project, maternal reports suggested few significant differences between children in the program and control groups, whereas teachers' reports suggested significant improvements among New Hope boys (Bos et al., 1999). Even though these findings do not establish that program effects on parenting or other measures of family functioning may alter mothers' perceptions of their children and child outcomes, they do suggest that maternal reports provide only one perspective about the well-being of children.

Evaluating MFIP's effects on children also requires an assessment of whether the effects are large or small. An impact may be statistically significant, but is it large enough to be deemed important? Evaluating the size of an impact on various measures of adult economic outcomes is relatively straightforward. For example, most can assess whether or not an impact of $200 has a large or small effect on an individual's annual income. It is much more challenging to evaluate whether or not a 10-point change in a scale measuring a child's behavioral problems, or a 5 percent change in a scale measuring school progress, is large or small.

One method of assessing whether or not an impact on outcomes such as a behavior scale is large or small is to standardize it. An impact estimate can be converted into an *effect size*, which is computed by dividing the impact (the difference in outcomes between the program group and the con-

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assignment, whether focal child is firstborn, whether focal child is female, whether respondent was a teen mother of focal child, age of child in months, and whether mother grew up in an AFDC household.

trol group) by the standard deviation of the outcome. The absolute value of the effect size provides a standardized measure of the program impact that can be used to compare program impacts on outcomes with very different scales. Effect sizes generally range from 0 to 1, where a larger absolute value indicates a larger impact of the program and a smaller absolute value indicates a smaller impact of the program. Generally, effect sizes of 0.1, 0.3, and 0.5 are considered small, medium, and large, respectively (Cohen, 1988; Lipsey, 1990).[21] These benchmarks are based on nonexperimental studies that cover a broad range of topics. A review of effect sizes achieved in studies that are similar to MFIP gives a better sense of the impact of MFIP on children's outcomes relative to other experimental studies.

Some experimental programs, like MFIP, target adults' employment, income, and receipt of public assistance; through these and other changes in parental behavior, the programs are likely to affect children. Examples include the New Hope Project (Bos et al., 1999), the Teenage Parent Demonstration (Kisker et al., 1998), the National Evaluation of Welfare-to-Work Strategies (which operated in 11 sites; Freedman et al., 2000; McGroder et al., 2000), and the Canadian Self-Sufficiency Project (Morris and Michalopolous, 2000). In general, effect sizes on child outcomes in these studies range from 0.0 to 0.3.[22] Thus, benchmarks of effect sizes may change depending on the frame of reference. Compared with similar experimental studies, effect sizes of 0.1, 0.2, and 0.3 may be a more reasonable basis for evaluating whether MFIP's effects are small, medium, or large, respectively.

Although effect sizes allow comparisons across outcomes that have different scales, effect sizes are not informative in assessing whether or not the impacts on outcomes are important or "socially significant"; nor do they help in assessing to what extent current changes in particular child outcomes are known to affect the future well-being of children or to extract a future benefit to society. For example, if high school graduation results in a higher likelihood of adult employment and if empirical literature suggests that a 5 percent change in grade performance during a child's early-school-age years leads to a higher likelihood of high school graduation, then this 5 percent change is important. The effect sizes of MFIP's impacts on child outcomes are presented in Chapter 6, along with a discussion of their importance.

[21]These breakdowns are remarkably similar to Cohen's original hypotheses about what should be categorized as a small, medium, or large effect.

[22]New Hope did find larger effects (0.2 to 0.5) for boys in the program group, based on teachers' reports of their behavior and school performance.

Chapter 3

MFIP's Effects on the Children of Long-Term Recipients in Urban Counties

This chapter presents the full program impacts of the Minnesota Family Investment Program (MFIP) on children in long-term recipient families who lived in urban counties (Anoka, Dakota, and Hennepin Counties). The primary goals of this chapter are to present concisely the full program impacts of MFIP, to explain the construction of the outcomes in this study, and to discuss briefly the relevant literature about these outcomes and their link with children's well-being. The impacts are organized into five broad categories: employment, income, and resources (Section II); children's and family environment (Section III); parent-child relationships and family functioning (Section IV); child outcomes (Section V); and selected subgroups (Section VI). Chapter 4 further explains these impacts; how they may be attributed to different components of the MFIP intervention; and the links among impacts on direct outcomes, intermediate outcomes, and child outcomes.

To illustrate how MFIP's effects are examined in this chapter, Figure 3.1 replicates Figure 1.2 and replaces the conceptual measures with actual measures available from the MFIP child study data.[23] The chapter is most informative about the intermediate and child outcomes (columns 3 and 4). For example, the intermediate outcomes that are analyzed include material hardship, food security, child care, the quality of the home environment, domestic abuse, and maternal depression. The figure also shows that a number of measures of child behavior (for example, the Behavioral Problems Index and the Positive Behavior Scale) and of academic achievement are available but that objective measures of cognitive functioning (for example, the Peabody Picture Vocabulary Test) are not available.

I. Summary of the Main Findings

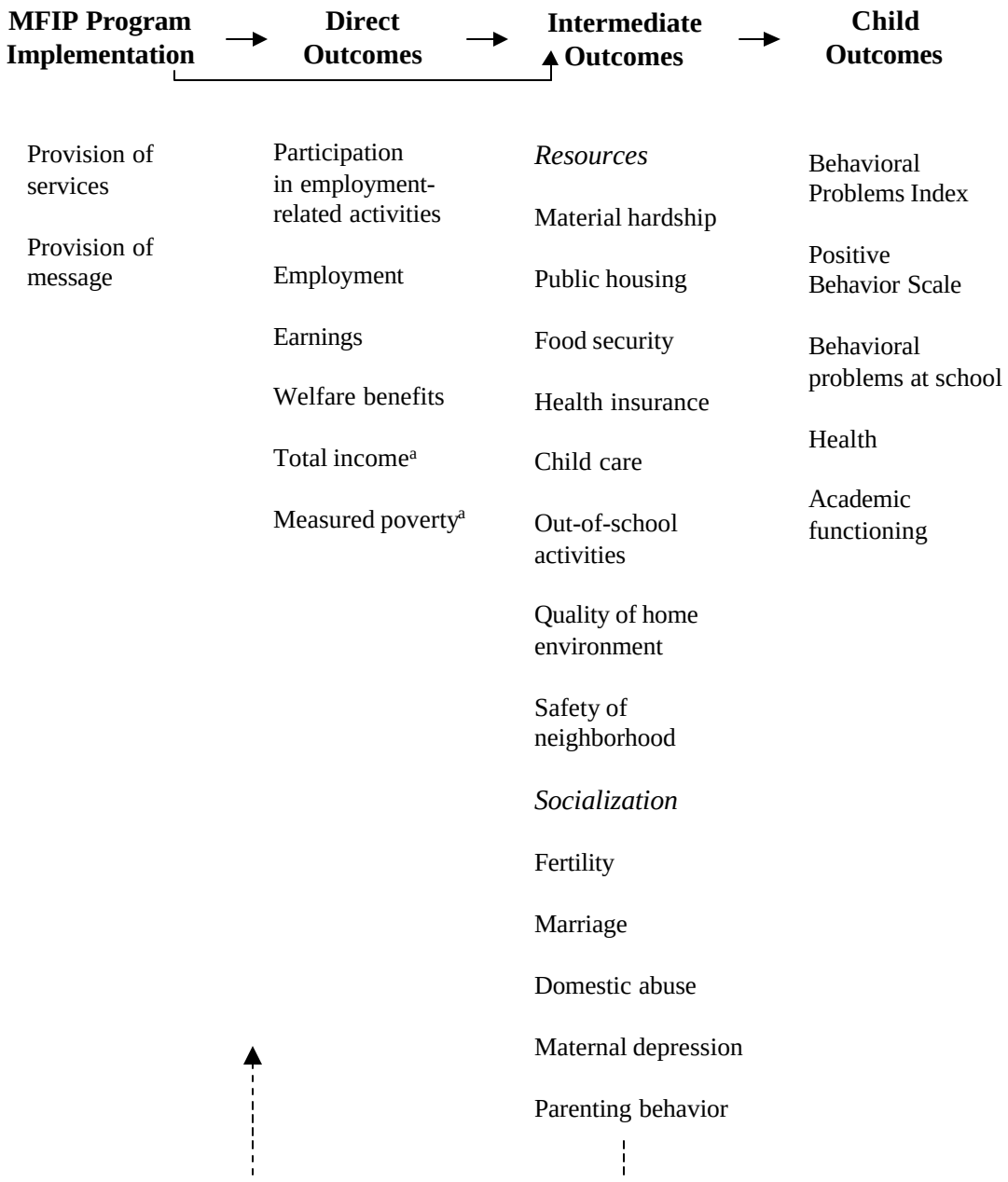
Figure 3.2 also replicates Figure 1.2; it summarizes the significant effects of MFIP compared with AFDC on family and child outcomes. Bold type indicates a significant difference or impact — at least at the 0.10 level using a two-tailed t-test — between long-term recipients in MFIP and long-term recipients in AFDC; an arrow before the name of the outcome indicates the direction of the impact. An upward arrow indicates that on average the program group achieved a higher level on the outcome, compared with the control group; a downward arrow indicates that on average the program group achieved a lower level on the outcome, compared with the control group. The figure provides both a snapshot and a general context for understanding the potential pathways through which MFIP may have affected children.

- **MFIP decreased children's behavioral problems and improved their academic functioning.**

[23]For simplicity, outcomes were categorized under resources or socialization even if some outcomes, such as marriage, may be categorized under both.

Figure 3.1

Conceptual Model of the Effects of MFIP on Child Outcomes and the Actual Measures Used in the MFIP Child Study



NOTES: Outcomes within each column may also interact with or influence each other. The intermediate outcomes are classified in this way for simplicity. In some instances an intermediate outcome, such as marriage, may affect children via both pathways.

[a]Calculated based on the sum of income from benefits and earnings.

Figure 3.2

Summary of the Significant Effects of MFIP on Child Outcomes for Long-Term Recipients in Urban Counties

MFIP Program Implementation	Direct Outcomes	Intermediate Outcomes	Child Outcomes
Provision of services	↑ **Participation in employment-related activities**	*Resources*	↓ **Behavioral Problems Index**
Provision of message	↑ **Employment**	Material hardship	Positive Behavior Scale
	↑ **Earnings**	Public housing	Behavioral problems at school
	↑ **Welfare benefits**	Food security	Health
	↑ **Total income**[a]	↑ **Health insurance**	↑ **Academic functioning**
	↓ **Measured poverty**[a]	↑ **Child care**	
		Out-of-school activities[b]	
		Quality of home environment	
		Safety of neighborhood	
		Socialization	
		Fertility	
		↑ **Marriage**	
		↓ **Domestic abuse**	
		Maternal depression	
		Parenting behavior	

NOTES: Any significant difference, at least at the .10 level, between the program group and the control group (the impact) is indicated in bold. The arrows next to bold items indicate the direction of the impacts.

Outcomes within each column may also interact with or influence each other. The intermediate outcomes are classified in this way for simplicity. In some instances an intermediate outcome, such as marriage, may affect children via both pathways.

[a]Calculated based on the sum of income from benefits and earnings.

[b]There was a significant decrease in one of the three measures of out-of school activities.

Compared with maternal reports of children in AFDC families, mothers in MFIP reported that their children scored significantly lower on the total Behavioral Problems Index (BPI) as well as on its externalizing subscale, and they scored significantly higher on a school engagement scale and on performance in school.

- **MFIP increased long-term recipients' employment, earnings, and income.**

MFIP significantly increased participation in employment-related activities, employment, earnings, and welfare income. Long-term recipients in MFIP were more likely than the AFDC group to work 20 to 34 hours per week, to earn a moderate wage, and to remain continuously employed during most of the follow-up period. These increases led to an overall increase in average income (measured as the sum of benefits and earnings), and they reduced measured poverty.

- **Children in MFIP were more likely to have continuous health insurance coverage.**

MFIP increased the likelihood that children were continuously covered by health insurance, most often through Medicaid or MinnCare. MFIP did not have any significant impact on maternal ratings of children's overall health or on the timing of visits to doctors and dentists. However, MFIP did increase the likelihood that *any* child in the family visited an emergency room or clinic in response to an accident, injury, or poisoning.

- **MFIP increased the use of child care, especially stable formal care as in a child care center. MFIP decreased children's participation in lessons, clubs, and similar activities and had no impact on children's participation in extended day programs or extracurricular activities.**

For long-term recipients, MFIP significantly increased the use of child care during the follow-up period, especially the use of formal arrangements as in a child care center. MFIP increased the number of months that children were in formal care and made it more likely that they continuously stayed in a formal care arrangement. MFIP decreased children's participation in lessons, clubs, and activities and had no effect on children's participation in extended day programs or extracurricular activities.

- **MFIP increased marriage among long-term recipients and reduced domestic abuse.**

MFIP increased the likelihood of participants' being married at the time of the 36-month interview. Consequently, children in MFIP were significantly more likely to live in two-parent families. Long-term recipients in MFIP reported fewer incidences of domestic abuse by intimate partners and others, including family members and unrelated individuals.

- **MFIP generally had no impact on the quality of the home environment or on maternal depression or parenting behavior.**

MFIP did not consistently affect measures of the quality of the home environment for children, including their engagement in cognitively stimulating activities such as reading or being taken to a museum; and it did not affect interviewers' assessments of the physical environment of the home, such as

cleanliness and safety. MFIP's only effect across multiple measures of parenting was to increase supervision, or mothers' knowledge of their child's whereabouts while away from home. MFIP had no effect on maternal depression or on the incidence of being at high risk of clinical depression.

- **MFIP's effects were most pronounced for school-age children, girls, black children, and children of other nonwhite ethnicities. Furthermore, MFIP did no harm to the children of more disadvantaged long-term recipients.**

MFIP had more pronounced beneficial effects for school-age children than for preschool-age children, and these differences were statistically significant. The impacts of MFIP on child outcomes also were more pronounced for girls than for boys and for black children and children of other nonwhite ethnicities than for white children, although the differences in effects were not statistically significant. For parents, low education and limited work experience may be greater barriers to work than is prior welfare receipt. The group with five years of prior welfare receipt had higher employment rates during the follow-up period than the groups with low education and limited work experience, and the positive effects on intermediate and child outcomes occurred only for the group who had received welfare for more than five years. Most important, MFIP did not *negatively* affect the more disadvantaged families.

Although the findings summarized above do not support causal inferences, they are consistent with the pathways described in the general conceptual model (Figure 1.2), and they suggest ways in which MFIP may have affected child outcomes. For long-term recipients, MFIP significantly affected a number of outcomes that were primary targets of the program, including employment, earnings, and income. These impacts may have influenced multiple aspects of children's lives, in terms of both resources and socialization. For example, increased employment may have generated increased use of child care, and increased income or increased employment may have affected marriage or domestic abuse. All these impacts, in turn, likely influenced children's well-being.

II. MFIP's Impacts on Program Implementation, Employment Income, and Resources

This section describes MFIP's effects on program implementation, on the primary targets of the program — employment, earnings, welfare income, and poverty — and on resources for the long-term recipients in urban counties. A more detailed discussion of the effects of MFIP on these outcomes for the entire MFIP evaluation sample is presented in Volume 1 (Miller et al., 2000). Its analyses on employment, earnings, and income are replicated here for two reasons: (1) impacts on employment may differ for long-term recipients who were mothers of young children (age 2 to 9 at random assignment) compared with all long-term recipients, and (2) an understanding of how MFIP affected children is facilitated by presenting in one report the full range of outcomes shown in the conceptual model.

A. Program Implementation

For MFIP to alter employment behavior effectively, its rules and incentives must be communicated and implemented correctly. Table 3.1 shows that recipients in the MFIP group had higher rates of participation in employment-related activities, especially job search (not

Table 3.1

MFIP's Impacts on Participation, Employment, Hours Worked, Wages, Number of Jobs Held, and Employment Stability for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)	
Participation and employment since random assignment (%)				
Ever participated in an employment-related activity (from survey)	91.4	71.6	19.8	***
Average quarterly employment rate (from administrative records)	72.8	57.7	15.1	***
Worked since random assignment (from survey)	88.3	74.9	13.4	***
Hours worked per week in current or most recent job (%)				
Did not work	11.7	25.1	-13.4	***
Worked part time	25.4	17.5	7.9	**
1-19 hours	8.0	8.9	-0.9	
20-29 hours	17.0	8.7	8.3	***
Worked full time	62.6	57.4	5.2	
30-34 hours	14.2	8.3	6.0	**
35-44 hours	40.8	39.7	1.1	
45 hours or more	7.6	9.5	-1.9	
Average hours worked among those employed	*33.3*	*34.8*	*-1.5*	
Hourly wage in current or most recent job (%)				
Did not work	11.7	25.1	-13.4	***
Less than $5	5.4	7.3	-1.9	
$5 to $6.99	20.8	14.7	6.1	*
$7 to $8.99	33.3	25.6	7.7	**
$9 or more	27.7	26.2	1.5	
Average wage among those employed ($)	*8.26*	*8.48*	*-0.22*	
Number of jobs held since random assignment				
1	27.4	26.9	0.5	
2 or 3	34.8	29.1	5.7	
4 or more	15.4	10.8	4.6	*

(continued)

Table 3.1 (continued)

Outcome	MFIP	AFDC	Difference (Impact)
Employment stability			
Respondent worked since random assignment and reported all job dates	76.5	66.1	10.5 ***
First employment spell began within 12 months of random assignment	54.4	38.8	15.6 ***
First spell lasted less than 12 months	18.2	13.9	4.2
Employed after first spell	16.2	9.3	6.8 **
Not employed after first spell	2.0	4.6	-2.6 *
First spell lasted more than 12 months	36.2	24.8	11.4 ***
First employment spell began 12 or more months after random assignment	22.1	27.3	-5.2
Sample size (total = 587)	306	281	

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample sizes may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

Outcomes shown in italics are nonexperimental.

See text and Appendix C for details regarding the construction of outcomes.

shown), compared with recipients in the AFDC group who could voluntarily participate in employment services through STRIDE. As discussed in Volume 1, compared with recipients in AFDC, long-term recipients in MFIP were significantly more likely to understand that they were required to work and that they could receive child care and health benefits if they left welfare for work.

B. Employment, Earnings, Income, and Resources

The employment rate and welfare receipt rate were constructed as average quarterly measures over the follow-up period. For this report, welfare payments, earnings, and income from welfare and earnings were constructed and are presented as average annual measures. Welfare assistance is defined as the sum of payments from AFDC or MFIP, Family General Assistance, and Food Stamps. Because the overall averages of these outcomes over the 36-month period more closely depict permanent changes in a family's economic status, they are the most important from the perspective of affecting children's well-being.[24]

Impacts on Employment and Characteristics of Employment. Table 3.1 presents MFIP's impacts on employment and characteristics of employment. The average quarterly employment rate for recipients in AFDC during the 36-month follow-up period was 57.7 percent. MFIP significantly increased this rate, by 15 percentage points, for a 26 percent increase over the control group. The increase in employment was strongest during the first year after random assignment, at 17.7 percentage points, and gradually decreased by the third year after random assignment to 12.2 percentage points (not shown). The gradual increase in employment rates over time for long-term recipients in the control group contributed to the smaller impacts on employment during the third year of follow-up.

As was suggested in the brief literature review in Chapter 1 regarding the effects of employment on childrens' well-being, the characteristics of a mother's job and the stability of her employment may be relatively more important in affecting children's well-being than are the effects of *any* employment. The quality and stability of employment may also offset any detrimental effect of employment in general. For young school-age children in particular, mothers' part-time employment may not have a similar effect as full-time employment. For example, mothers with stable jobs or jobs with benefits may be less stressed, which in turn may affect the way they parent. Selected characteristics of maternal employment are available from the core section of the 36-month survey. These characteristics include hours of employment in a current or most recent job, wages for this job, benefits from this job (such as paid sick leave, paid vacation, and health benefits), and employment history — which can be used to determine the number of jobs held since random assignment or the duration of employment or job spells. A more complete discussion of the construction and interpretation of these outcomes and of MFIP's impacts on them can be found in Volume 1 (Miller et al., 2000).

Table 3.1 presents MFIP's impacts on a number of employment characteristics. MFIP significantly increased the likelihood that long-term recipients worked 20 to 34 hours per week and earned $5 to $9 per hour in their most recent or current primary job, compared with the control group.[25] MFIP

[24]Note that instability of income may be equally important for children's well-being. However, because MFIP showed consistent positive impacts on income throughout the follow-up period, this section focuses on the importance of permanent changes in children's economic status.

[25]The companion report notes that MFIP significantly increased full-time employment. The impacts on hours may be slightly different for this sample because of a different exemption on hours worked for sample members with a (continued)

also significantly increased the number of recipients who held four or more jobs over the three-year follow-up period. MFIP significantly increased the proportion of recipients who started work within 12 months of random assignment and who stayed employed for more than 12 continuous months. In summary, because of MFIP, recipients went to work. Compared with the AFDC group, their employment was more likely to be in a job with modest wages and for less than 34 hours per week, and their employment was fairly consistent during the follow-up period. However, these recipients were also more likely to have had four or more jobs over the follow-up period, and their most recent or current primary job was less likely to offer paid benefits, such as paid vacation and sick leave (not shown).

Impacts on Earnings, Welfare, and Income. Table 3.2 presents MFIP's impacts on earnings, welfare, income, and the components of income. On average, long-term recipients in AFDC earned $3,906 per year during the 36-month follow-up period. MFIP significantly increased average annual earnings for long-term recipients over the 36-month follow-up period; they earned $751 more than the control group. These increases in average annual earnings persisted for two years after random assignment. By the third year after random assignment (not shown), although the impact on average annual earnings was still positive ($588), it was no longer significant.

By the third year of follow-up, nearly 76 percent of recipients in the AFDC group received welfare. MFIP significantly increased the average quarterly welfare receipt rate over the 36-month follow-up period, by 4.5 percentage points, for a 5 percent increase over the control group. The rate of welfare receipt, however, was not statistically different between the MFIP and AFDC groups until the third year of follow-up (not shown). While there was less than a 2 percentage point difference in the rate of welfare receipt between the two groups in year 1, this increased to a statistically significant 8 percentage point impact by year 3. MFIP also significantly increased average annual welfare payments over the 36-month follow-up period. By year 3, average annual payments were positive ($532) but not statistically different between single-mother recipients in MFIP and AFDC (not shown). The increase in welfare receipt is expected, because MFIP allows more working families to remain eligible for benefits.

The next outcomes presented in Table 3.2 are income and poverty. Income can be delineated in two different ways: as current income, which may fluctuate over time, or as permanent income, which represents a family's average income over a long period of time and, therefore, more closely depicts a family's steady economic status. Because children benefit more from permanent increases in income, MFIP's effects on permanent income are particularly important. The measure of permanent income shown in the table is average annual income from welfare and earnings over the 36-month follow-up period. This measure has two weaknesses: (1) permanent income may not be measured adequately over only a three-year time period, and (2)

child under age 6. If a sample member had a child under age 6 and was working 20 hours per week, then the MFIP caseworker was required only to refer the participant to case management and did not necessarily require an increase in hours worked (that is, up to 30 hours per week).

Table 3.2

MFIP's Impacts on Earnings, Welfare, Income, and Poverty for Long-Term Recipients in Urban Counties

Outcome (%)	MFIP	AFDC	Difference (Impact)	
Earnings and welfare since random assignment				
Average annual earnings ($)	4,657	3,906	751	*
Average quarterly receipt rate (%)	91.0	86.5	4.5	**
Average annual welfare benefit ($)	7,014	6,458	556	**
Income and poverty since random assignment				
Average annual income from welfare and earnings ($)	11,671	10,364	1,307	***
Measured poverty[a] (%)	68.5	81.3	-12.8	***
Income and poverty since random assignment with estimated EIC[b]				
Average annual income from welfare and earnings with estimated EIC ($)	12,734	11,128	1,606	***
Measured poverty with EIC[a] (%)	57.7	74.5	-16.8	***
Income sources				
Proportion of income from earnings[c] (%)	33.9	30.1	3.8	
In last quarter of follow-up (%)				
Earnings, welfare	38.2	22.6	15.7	***
Earnings, no welfare	18.4	25.9	-7.5	**
No earnings, welfare	33.7	42.8	-9.2	**
No earnings, no welfare	9.7	8.7	1.0	
Sample size (total = 587)	306	281		

SOURCES: MDRC calculations using data over 12 quarters from Minnesota's Unemployment Insurance (UI) earnings records and welfare benefit records.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

[a]Measured poverty is defined as the percentage of families whose earnings plus welfare benefits are below the official poverty threshold. The appropriate threshold is determined by the number of children in the family. Because the measure of income used here includes earnings, cash welfare, and Food Stamp benefits but does not include income from other sources, the measured poverty rate presented here is not comparable with the official poverty rate.

[b]These estimates are calculated assuming that all eligible individuals received both the federal and the state Earned Income Credit (EIC). Estimated payroll taxes and federal and state income taxes are also subtracted.

[c]Proportion of income is an average over three years. It is slightly different from average earnings divided by average income.

this measure of income does not include income from sources other than the mother's welfare and earnings, such as the earnings from other members of the household or a spouse. Despite these weaknesses, this measure of permanent income is a more accurate representation of income than a shorter-term snapshot of current income.[26] The table also presents income and poverty outcomes that adjust for benefits received through the federal and state Earned Income Credits (EIC, also known as EITC) as well as any federal and state taxes paid. The EIC has become an increasingly important transfer program for low-income families that also provides a strong incentive to work.

Table 3.2 shows that before adjustments for the EIC and taxes, average annual income from welfare and earnings for recipients in AFDC during the 36-month follow-up period was $10,364. MFIP significantly increased average annual income from welfare and earnings, by $1,307, or 13 percent. The increase was relatively similar for each of the three years during the follow-up period, and much of the income increase during the first two years after random assignment can be attributed to an increase in earnings (not shown). Moreover, based on welfare and earnings, MFIP reduced the number of recipients below the poverty level by 12.8 percentage points, a 16 percent reduction compared with the control group. After adjustments for the EIC and taxes, MFIP significantly increased total income by $1,606 and reduced measured poverty by 16.8 percentage points, a 22 percent reduction compared with the control group.

The final set of outcomes presented in Table 3.2 are measures of income sources, or composition. Although MFIP families were more likely to receive welfare during the follow-up period, on average a slightly higher proportion of their income came from earnings (33.9 percent versus 30.1 percent for the AFDC group), although this difference is not statistically significant. In the last quarter of follow-up, recipients in the MFIP group were significantly more likely to combine welfare and work (15.7 percentage points), less likely to rely solely on earnings (7.5 percentage points), and less likely to rely solely on welfare (9.2 percentage points). This is as expected, given the structure of MFIP's financial incentives.

Impacts on Resources. MFIP increased employment and income as measured by earnings and welfare benefits. MFIP also may have significantly affected the consumption of goods that satisfy basic needs — such as food, electricity, and doctor's visits — and thus the level of financial strain on the family. Because MFIP is structured to allow families to combine welfare and work, recipients continue to be tied to the public assistance system, and so they may be more likely to utilize public benefits such as Medicaid. An additional benefit of being tied longer to the welfare system through MFIP — and of cashing out Food Stamps and of having MFIP staff reinforce the availability of transitional benefits — is that working parents may be more likely to continue to receive public health insurance benefits or Food Stamp benefits.[27] Recent studies suggest that the receipt of Food Stamp benefits could significantly decrease the number of children currently in extreme povrty (for example, Sherman, 1999). Because having health insurance may increase the likelihood of routine medical care, contact with medical

[26]Measures of total income in the month prior to the interview date are available from the survey. As a snapshot at one point in time, this measure of current income may not represent the typical income level in the family. A full discussion of impacts on the components of current income is included in the companion report. MFIP's impacts on these components are similar for this study and the study of adult outcomes (Miller et al., 2000).

[27]With the dismantling of the AFDC program and the imposition of time limits, many families may assume that they are no longer eligible for Food Stamp benefits.

professionals, and care during emergencies, children in MFIP may be at reduced risk of poor health. Table 3.3 presents MFIP's impacts on material hardship, food security and children's health insurance coverage.

Data about noncash benefits and material hardship are collected from the core section of the 36-month survey. These outcomes are not specific to the focal child but rather depict the overall well-being of the family. A mean score was created from a series of statements about financial strain (Perceptions of Financial Strain) that ranges from 1 to 4, with a higher score indicating greater financial strain. These items include "My financial situation is better than it's been in a long time" and "I worry about having enough money in the future." Mothers also responded either "yes" or "no" to a series of questions about being able to meet such basic needs as paying rent or seeing a doctor. A summary score of these items (Material Hardship Index) was created that ranges from 0 to 7, with a higher score indicating a greater level of material hardship. In addition to these two scales, three variables depict the family's housing status: home ownership, public or subsidized housing, and other housing (for example, leased or rented). Technical details about these scales and outcomes are presented in Appendix C.

As shown in Table 3.3, for recipients on AFDC, the mean level of financial strain is 2.9 (of a maximum of 4), and the mean level of material hardship is 1.6 (of a maximum of 7). These levels suggest that although perceptions of financial strain were somewhat high, mothers still felt that they could meet their family's basic needs. Recipients in MFIP reported similar levels of financial strain and material hardship. The majority of recipients in AFDC did not own their home or live in public or subsidized housing; most lived in other housing such as a rented home or room. MFIP did not significantly affect recipients' housing status.

Measures of food security were constructed from maternal reports about the kinds of foods eaten in the household and whether or not any children had to skip meals. Approximately 80 percent of recipients in AFDC reported that their family had enough food to eat in the month prior to the interview, and 4 percent reported that at least one of their children skipped a meal because there was not enough money for food. MFIP did not have any effect on these outcomes. Finally, it is important to note that because MFIP packages Food Stamp benefits, Family General Assistance, and welfare into one cash transfer, and because MFIP keeps families tied to the public assistance system, these children may have benefited indirectly from the continued receipt of Food Stamps even after their families were no longer eligible for cash assistance.[28]

Measures of health insurance in Table 3.3 were constructed from the core survey, which asked detailed questions about health insurance coverage, including private coverage (for example, from an HMO) and public health insurance coverage (Medicaid or MinnCare). Sixty-seven percent of AFDC long-term recipients reported that their children were continuously covered by health insurance during the past 36 months. MFIP significantly increased the number of children continuously covered by health insurance, and it significantly increased the likelihood that these children were covered by Medicaid or MinnCare at the time of the survey. Compared with children in AFDC families, children in MFIP families were nearly 9 percentage points more

[28]The receipt of Food Stamp benefits may not be separated from receipt of other welfare benefits for children in MFIP. Consequently, Food Stamp receipt is not examined as an individual outcome.

Table 3.3

MFIP's Impacts on Material Hardship, Food Security, and Health Insurance for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)	
Material hardship				
Perceptions of financial strain	2.8	2.9	-0.1	
Index of material hardship	1.6	1.6	0.0	
Own home (%)	12.8	15.3	-2.6	
Live in public or subsidized housing (%)	17.2	19.4	-2.2	
Live in other housing (%)	70.1	65.2	4.9	
Food security				
In last month, family had enough to eat (%)	79.8	80.1	-0.3	
In the last month, did any children skip a meal because not enough money for food? (%)	5.9	3.9	2.0	
Health insurance				
Children continuously covered by health insurance during past 36 months (%)	75.5	67.0	8.5	**
In the last month, were children covered by Medicaid or MinnCare? (%)	73.9	67.6	6.3	*
In the last month, were children covered by private insurance? (%)	20.9	23.9	-3.0	
Sample size (total = 587)	306	281		

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

likely to have had continuous coverage and were 6 percentage points more likely to be covered by Medicaid or MinnCare.

III. MFIP's Impacts on Child's and Family's Environment

This section presents MFIP's effects on various aspects of the child's and family's environment, beginning with MFIP's impacts on child care and out-of-school activities. Section II showed that, compared with AFDC, MFIP increased average quarterly employment rates by 26 percent and increased income by 13 percent. Some of this employment was full time (at least 30 hours per week), and some of it was part time (20 to 29 hours per week). Mothers who work full time may need different child care arrangements than those who work part time. Furthermore, apart from fulfilling any child care needs, mothers may invest their increased income in supervised out-of-school activities for their children to help prevent high-risk behaviors like smoking, drinking, and criminal activities.

The next part of this section presents MFIP's impacts on the child's home and neighborhood environments. MFIP's impacts on parents' employment and income may affect a number of characteristics about a child's environment both within the home (such as living with another parent or having more books) and outside the home (such as moving into a safer neighborhood or being able to go to the museum more often). Long-term recipients in MFIP may use their increased income to invest in their children's environment.[29] These mothers may purchase such items as books or music instruments, may improve the interior conditions of their home, or may move into safer neighborhoods. The home environment accounts for a substantial portion of the effect of low income or poverty on the cognitive development of preschool children and on the achievement test scores of elementary school children (Duncan, Brooks-Gunn, and Klebanov, 1994; Korenman, Miller, and Sjaastad, 1995; Garrett, Ng'andu, and Ferron, 1994). The quality of the home environment is also predictive of a child's future intellectual development and is an early indicator of developmental risks (for a review, see Center for Human Resource Research, 1993). Living in a neighborhood of higher socioeconomic status is also associated with better child and adolescent outcomes (Brooks-Gunn et al., 1993; Duncan, Brooks-Gunn, and Klebanov, 1994).

For information about selected child care outcomes, see Box 3.1. For information about outcomes that measure the quality of the home environment, see Box 3.2. Details about these outcomes are discussed in Appendix C.

[29] Another important aspect of a child's environment that may be affected by MFIP is stability. Family instability is associated with young children's externalizing behavior (Ackerman et al., 1999). Aspects of family instability include number of moves or residence changes, number of primary caregiver's intimate relationships, number of families the child lives with, and primary caregiver's job turnover. While participation in MFIP may lead to a change in one or more of these events, such as moving to another neighborhood, these events are also more likely to consequently remain stable. Summary measures of family stability are not examined in this report but may be explored in future analyses.

Box 3.1

Child Care

Information about child care for the focal child was collected in the child section of the survey. Details about the construction of these outcomes can be found in Appendix C.

Type of Child Care Used. The survey collected information from mothers about any child care arrangement used at least once a week for a month or more since random assignment. These arrangements are categorized into informal care, formal care, never used formal/informal child care, and self-care. With the exception of never used child care, these categories are not mutually exclusive; that is, children in self-care may have also been in informal care at some time during the follow-up. Informal care includes care by the child's father, siblings, grandparents, or a relative; the mother's spouse or partner; or a baby-sitter not related to the child. Formal care includes center-based or group care; summer daycare or extended day programs; and clubs, lessons, or activities.

Out-of-School Activities. Because a majority of the focal children in recipient families were school-age by the time of the interview, and because participation in out-of-school activities or supervised activities may benefit school-age children, impacts are presented on attendance in extended day programs; participation in lessons, clubs, or activities; and participation in extracurricular activities. The first two measures are subsumed in the category of formal child care. The last measure is constructed from three separate questions asked in a different part of the child section of the survey about the focal child's participation in (1) lessons, such as music, dance, language or computer; (2) clubs or organizations, such as scouts, religious groups, or girls' or boys' clubs; and (3) sports teams. Although the measure of extracurricular activities somewhat overlaps the first two measures, it may capture some different aspects of children's care in cases where mothers do not think of extracurricular activities as "child care."

Child Care Quality. Measures of child care quality were constructed from a 12-item Emlen scale. Mothers reported the extent to which, during the week prior to the interview, they felt that their primary child care arrangement was safe and secure, treated the child with respect, and handled discipline matters appropriately. This information was collected for both formal and informal child care arrangements, and three scales were constructed: a total Emlen scale (all items), a warmth subscale (five items), and a safety subscale (three items). Any score above 36 for the total Emlen, above 15 for the warmth subscale, and above 9 for the safety subscale is considered to indicate "high quality." Thus, the outcomes are equal to zero for those who scored lower than these values and for those who did not report using child care in the week prior to the interview.

Child Care Stability. In addition to general information about the types of child care used since random assignment, mothers were asked to complete a child care calendar.* From this calendar, a month-by-month history of child care was constructed by analyzing data for 36 months after the date of random assignment. Outcomes were constructed about the total number of months a child was in formal or informal care, the total number of months in one arrangement, and the consistency of care (that is, the length of child care spells) during the 36-month follow-up period.

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*Information for the child care calendar was collected by computer and could be viewed on-screen by the mother. To help assess the stability of child care, interviewers marked on the calendar the focal child's birth date and the start and end dates of any jobs the mother held since random assignment.

Table 3.4 presents MFIP's impacts on child care and out-of-school activities. In general, and perhaps unsurprisingly, long-term recipients on AFDC reported a relatively higher use of informal care (68 percent) than of formal care (42 percent). This may indicate that formal child care is more difficult to find and afford, that mothers have a preference for informal care, or that informal care is commonly used in addition to formal care. Approximately 33 percent of AFDC recipients reported using both formal and informal care during the 36-month follow-up period (not shown). MFIP significantly increased the use of child care, particularly formal care. Long-term recipients in MFIP were 10.6 percentage points, or 25 percent, more likely to use formal care and 7.5 percentage points, or 11 percent, more likely to use informal care than AFDC families. The increase in the use of formal care was especially concentrated in center-based or group care (not shown).

The patterns of impacts on participation in formal and informal child care over the 36-month follow-up period are presented in Figures 3.3 and 3.4. Figure 3.3 suggests that MFIP increased the use of formal child care throughout the 36-month follow-up period; the impacts were significant for 18 of the 36 months. In Figure 3.4, despite a significant increase in MFIP families' ever using informal care (that is, their use of informal care increased at a higher rate than the control group's), the month-by-month use of informal care during the follow-up period was less for MFIP long-term recipients than for AFDC families. MFIP's impacts on informal care were significant for 12 of the 36 months. These differences in the effects of MFIP on ever using informal care versus the month-by-month use of informal care suggest that AFDC mothers were more likely to keep their children in informal daycare arrangements.

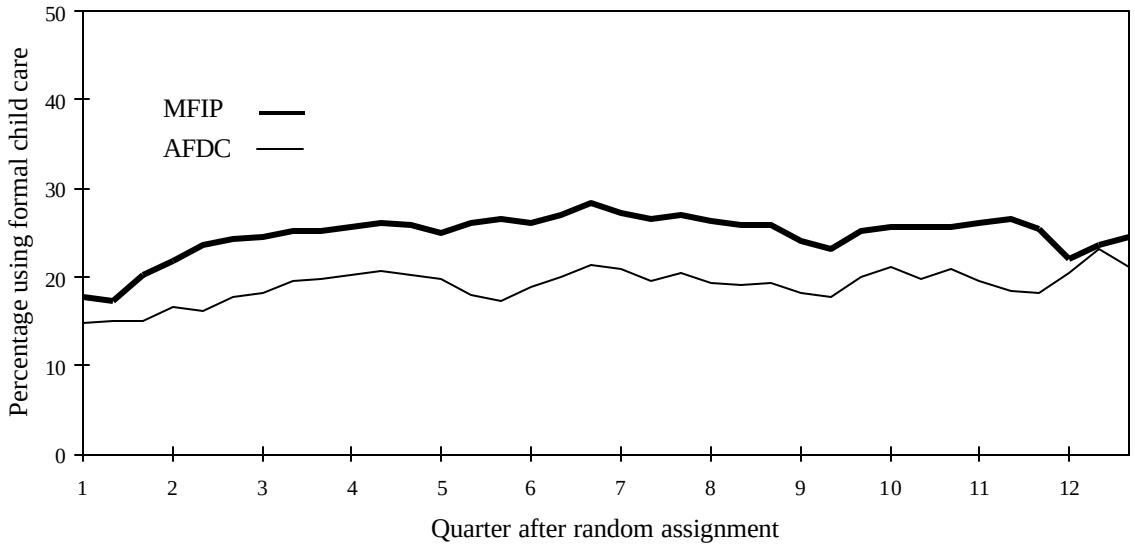
Table 3.4 also shows that MFIP did not significantly increase children's self-care during the follow-up period and that similar percentages of focal children in both groups participated in some kind of extracurricular activity; nor did it have an impact on participation in extended day programs. MFIP did, however, significantly decrease participation in lessons, clubs, and similar activities. In general, there is not a consistent pattern that suggests that MFIP affected focal children's participation in out-of-school activities. Either MFIP long-term recipients worked hours such that they could supervise their children during out-of-school hours, or they did not use their increased income to invest in extracurricular or out-of-school activities for their children to the degree that AFDC families did.

The last panel of Table 3.4 presents measures of child care quality. Whereas 37 percent of long-term recipients in the AFDC group rated their child care arrangement as being of relatively high quality, only 33 percent of the MFIP group did so (difference not statistically significant). The two groups gave similar ratings to the warmth of the child care provider and the safety of the child care arrangement. It appears that long-term recipients in MFIP and in AFDC were equally satisfied with the quality of their primary child care arrangement. Unfortunately, measures of child care quality were not collected throughout the follow-up period, during which MFIP families were significantly more likely to use formal child care arrangements compared with AFDC families.

Next, Table 3.5 presents MFIP's effects on the extent and stability of child care. On average, children of AFDC recipients were in formal care for 7 months and in informal care for 13 months over the 36-month period. MFIP significantly increased the total number of months that

Figure 3.3

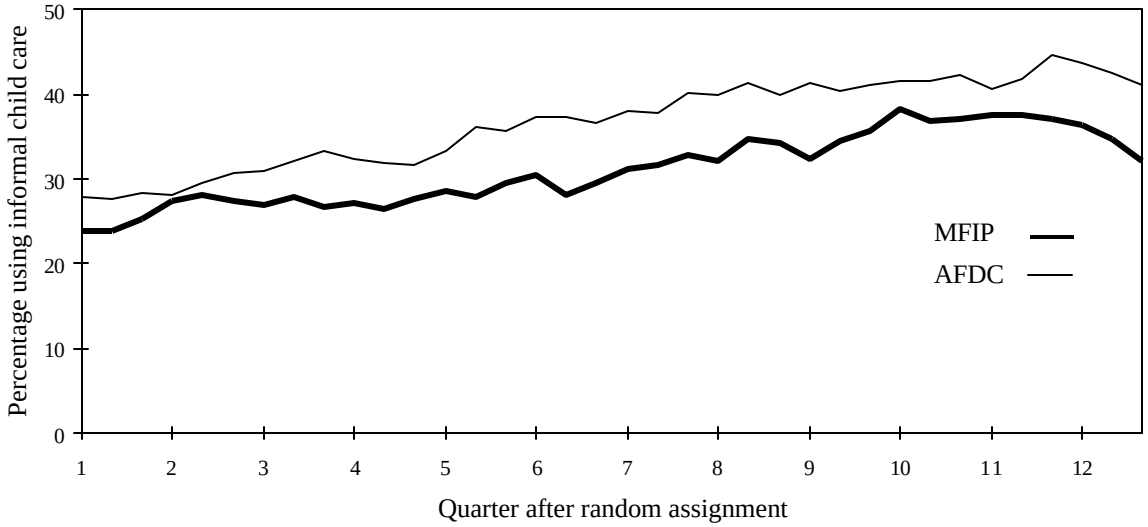
Quarterly Participation in Formal Child Care for Focal Children of Long-Term Recipients in Urban Counties



SOURCE: MDRC calculations using data from the 36-month client survey.

Figure 3.4

Quarterly Participation in Informal Child Care for Focal Children of Long-Term Recipients in Urban Counties



SOURCE: MDRC calculations using data from the 36-month client survey.

Table 3.4

MFIP's Impacts on Child Care and Out-of-School Activities for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)
Child care used since random assignment			
Never used child care (%)	12.1	22.0	-9.9 ***
Formal child care (%)	52.8	42.3	10.6 ***
Informal child care (%)	75.2	67.7	7.5 *
Self-care (%)	13.7	16.2	-2.5
Out-of-school activities since random assignment			
Attended extended day program (%)	19.0	17.3	1.7
Participated in lessons, clubs, or activities (%)	4.1	9.3	-5.2 **
Participated in extracurricular activities (%)	55.6	53.9	1.7
Child care in week prior to interview			
Primary care in last week was formal care (%)	17.8	16.0	1.8
Primary care in last week was informal care (%)	26.5	33.6	-7.1 *
Total hours in care last week	9.4	10.0	-0.6
Total hours in self-care last week	1.8	0.8	1.0
For primary child care arrangement[a]			
Perception of high quality overall (%)	33.0	37.0	-3.9
Perception of high-quality warmth (%)	33.5	36.1	-2.7
Perception of high-quality safety (%)	37.2	40.7	-3.5
Sample size (total = 587)	306	281	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

[a]These measures were constructed using outcomes measured in the week prior to the interview from the Emlen scale; see Boxes 3.1 and 4.1 for details.

Table 3.5

MFIP's Impacts on the Extent and Stability of Child Care for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)
Extent of child care since random assignment			
Total months in formal care	8.9	6.9	2.1 **
Total months in informal care	11.2	13.2	-2.0
Total months with one arrangement	15.2	13.3	1.9
Stability of child care since random assignment			
Not missing child care calendar information (%)	88.1	83.2	4.9
Any child care (%)	78.2	71.9	6.3 *
Any formal child care (%)	46.4	36.6	9.8 **
First formal care spell started within 12 months (%)	33.5	25.8	7.8 **
Spell lasted less than 12 months (%)	12.7	13.0	-0.3
Spell lasted more than 12 months (%)	20.9	12.8	8.1 **
First informal care spell started within 12 months (%)	39.3	41.3	-2.0
Spell lasted less than 12 months (%)	17.3	13.4	3.9
Spell lasted more than 12 months (%)	22.0	27.8	-5.8
Sample size (total = 587)	306	281	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

the focal child spent in formal care (by two months, or 30 percent), and it significantly decreased the number of months in which the child had two or more arrangements (not shown). MFIP did not significantly affect children's total number of hours in child care or self-care in the week prior to the interview date (shown in Table 3.4). This is not surprising, because MFIP also did not significantly increase the use of child care in the week prior to the interview date (not shown). Thus, although MFIP affected the use of child care and its duration over the three-year period, by the end of the period MFIP had no effect on weekly use or hours of child care.

Regarding the stability of child care arrangements, the second panel of Table 3.5 shows that MFIP increased the percentage of long-term recipients who used formal care during the period (by 9.8 percentage points) and that most of this increase was among long-term recipients who started using formal care within the first 12 months after random assignment. In addition, MFIP increased the number of long-term recipients who started using formal care within the first 12 months *and* continuously used that type of care for 12 months or more.[30] Thus, MFIP increased the use of stable formal care. MFIP did not have statistically significant effects on the timing or stability of informal care.

To assess MFIP's impacts on the child's and family's home environment, a scale was created from items adapted from the Home Observation for Measurement of the Environment (HOME) scale (Caldwell and Bradley, 1984). The scale used in this report resembles a modified version of the HOME scale, called the HOME-Short Form (HOME-SF), which was created in the National Longitudinal Survey of Youth (NLSY; Baker et al., 1993). Table 3.6 shows that, out of a maximum possible score of 99 on the total HOME scale, the average rating of the home environment for children in AFDC families was about 76 — the same as for children in MFIP families. MFIP did not affect the home environment, as measured by this study's construction of the HOME score and its subscale (see Box 3.2).[31]

In the core section of the 36-month survey, mothers were asked how often their family had moved since random assignment. As shown in Table 3.6, on average, AFDC recipients had moved two times, and MFIP families had moved nearly as often. In the child section of the survey, mothers were asked to rate the safety of their child's neighborhood. A child was coded as living in a safe neighborhood if the mother responded that her child's neighborhood was very safe or somewhat safe when the child was outside during the daytime. In the AFDC group, a majority of recipients (74 percent) responded that their neighborhood was safe or somewhat safe for their children during the day. MFIP did not significantly affect maternal perceptions of neighborhood safety.

[30]This outcome does not capture whether or not children were switching among different types of formal child care arrangements during the follow-up period.

[31]Modified versions of the HOME-SF cognitive subscale and of the routines subscale were constructed to be comparable as well with the studies in the Project on State-Level Child Outcomes. The cognitive stimulation score was coded dichotomously, similar to the NLSY, and comprises 11 items. The routines score is a sum of five items. MFIP had a significant positive impact on the routines subscale but not on the cognitive subscale. Note that these modified scores and the factor-analyzed score overlap by five items for the cognitive stimulation score and by four items for the routines score. Details about the factor analyses of the Project on State-Level Child Outcomes HOME subscales are included in Appendix C.

Table 3.6

MFIP's Impacts on the Home Environment and Neighborhood for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)
Quality of home environment			
Total HOME scale	75.7	75.5	0.2
HOME cognitive subscale	25.8	25.8	0.0
HOME routines subscale	16.4	16.2	0.2
HOME physical environment subscale	24.6	24.7	-0.1
Neighborhood			
Live in a safe neighborhood (%)	73.4	74.0	-0.6
Number of moves since random assignment	1.9	1.7	0.2
Sample size (total = 587)	306	281	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

Box 3.2

The Quality of the Home Environment

A large portion of the child section of the 36-month survey is allocated to collecting information about the focal child's home environment. All home environment items were recoded to range from 1, the least favorable score, to 3, the most favorable score (Polit, 1996). From these multiple items, four internally consistent scales of the home environment were constructed. Further details about these outcomes and the internal consistency of the HOME scale can be found in Appendix C.

Total HOME Score. This score is an overall measure of the quality of the child's home environment and was constructed from more than 30 items. The possible range of the total HOME score is from 33 to 99.

HOME Cognitive Score. This score measures the quality of the child's environment in terms of cognitive stimulation and includes such items as going to a museum, reading to the child, and owning a musical instrument. The HOME cognitive score is the sum of 12 items and has a possible range from 12 to 36.

HOME Routines Score. This score measures the extent to which the focal child engages in similar activities at the same time each day, and it includes such items as going to bed at a regular time and doing homework at the same time each evening. The HOME routines score is the sum of seven items and has a possible range from 7 to 21.

HOME Physical Environment Score. This score measures the quality of the physical interior and exterior of the child's home and neighborhood, as assessed by the interviewer, and it includes such items as the presence of artwork on the walls, whether the home is visibly clean, and whether the neighborhood is well kept.* The HOME physical environment score is the sum of 10 items and has a possible range from 10 to 30.

———————————————

*Interviewer assessments are missing for approximately 12 percent of the analysis sample (of the 1,900 families) primarily because interviews were conducted over the phone.

IV. MFIP's Impacts on Parent-Child Relationships and Family Functioning

Increased employment may increase parents' stress in balancing the demands of work and family, and it may also increase their self-esteem or feelings of self-worth. In addition, increased income may decrease stress. These are some ways in which MFIP may have affected marriage, parent-child relationships, and family functioning. This section presents MFIP's impacts on household composition, domestic abuse, psychological functioning, and parenting. Measures of the last three impacts were collected from the child section of the 36-month survey. Recall from Chapter 2 that these data were collected via Audio-CASI interviews and that preliminary analyses of the effectiveness of the CASI mode indicate that it improved the reliability of information collected about these topics (Gallup-Black, 1999).

This section begins by presenting MFIP's impacts on fertility, marriage, and cohabitation. Increased employment and income may either positively or negatively affect the likelihood that single mothers will marry or remarry. That is, employment may increase the likelihood of marriage by expanding a single mother's social networks or by increasing her self-esteem or attractiveness to a potential partner; or employment may decrease the likelihood of marriage because the mother has less time available to search for a partner. Similarly, greater income may increase the likelihood of marriage either by increasing the mother's attractiveness to a potential partner or by decreasing the strain in a potential relationship with a partner; or increased income may decrease the likelihood of marriage if it makes a single mother more self-sufficient without a partner or spouse.

Independent of MFIP's effects on income and employment, elements of the program may also encourage marriage. First, MFIP streamlined the eligibility requirements for two-parent families in which each partner is the biological parent of the child. In contrast to the AFDC-UP (Unemployed Parent) program, MFIP did not require a work history or restrict the number of hours a primary earner could work in a month (AFDC's 100-hour rule). Second, MFIP increased the stepparent income disregard compared with AFDC; that is, if an MFIP single mother married someone who was not the biological parent of at least one of her children, a higher amount of that stepparent's income was not counted against welfare benefits. Children may benefit from living in a two-parent family (in the absence of domestic abuse or a lot of conflict). Children who are raised in single-parent families tend to complete less education and earn less as adults than their counterparts raised in two-parent families. They are also more likely to become teen parents and to receive welfare (for a review, see McLanahan and Sandefur, 1994).

The next sections present MFIP's impacts on domestic abuse, maternal psychological functioning (depression), and parenting behavior. There are a number of reasons why MFIP may have affected these outcomes. Due to financial strain on parents, poor children are more likely to be exposed to lower-quality parent-child interaction; to less responsive, less active, and less spontaneous parenting; to marital conflict; and to increased use of harsh punishment or inconsistent discipline practices (McLoyd and Wilson, 1991; Conger, Conger, and Elder 1997; Duncan and Brooks-Gunn, 1997b; McLloyd et al., 1994).[32] Parenting practices may also be affected by depression, which may in turn be affected by employment and income. Depressed mothers are more likely to have negative perceptions of their children and to exhibit harsh behavior toward them (McLoyd and Wilson, 1991). Many women who are welfare recipients have experienced and continue to be at risk for experiencing physical or emotional abuse. These women also are more likely to suffer from depression, persistent anxiety, low self-esteem, and post-traumatic stress disorder (Raphael and Tolman, 1997), which in turn may affect the quality of their interactions with their children.

Table 3.7 presents MFIP's impacts on marital status and fertility, domestic abuse, maternal psychological functioning, and parenting behavior. Of recipients in the AFDC group, 27 percent had a child during the 36-month follow-up period, and 6 percent were married at the time of

[32]However, the relationship between parenting practices and income does not hold up when income is measured as an absolute level rather than as a change or loss from a previous period of time (Hanson, McLanahan, and Thomson, 1997).

Table 3.7

MFIP's Impacts on Household Composition, Domestic Abuse, Psychological Functioning, and Parenting Behavior for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)	
Marital status and fertility				
Had a child since random assignment (%)	26.3	27.0	-0.8	
Currently married and living with spouse (%)	11.3	6.2	5.0	**
Currently married to biological father (%)	2.7	0.9	1.8	
Currently cohabiting (%)	14.6	18.5	-3.8	
Currently cohabiting with biological father (%)	1.5	2.8	-1.3	
Domestic abuse				
Mother abused by intimate partner last year (%)	21.8	28.5	-6.7	*
Abused by current partner (%)	19.9	26.3	-6.4	*
Abused by ex-partner (%)	17.2	25.4	-8.3	**
Abused by partner and ex-partner (%)	13.9	21.5	-7.6	**
Experienced physical abuse (%)	20.1	25.2	-5.1	
Experienced nonphysical abuse (%)	7.2	9.7	-2.6	
Experienced physical and nonphysical abuse (%)	5.5	6.5	-1.0	
Mother abused by other person last year (%)	24.5	33.0	-8.4	**
Abused by family member (%)	19.4	24.6	-5.1	
Abused by unrelated individual (%)	22.2	28.4	-6.2	
Abused by family and unrelated individual (%)	15.3	15.1	0.2	
Experienced physical abuse (%)	23.5	30.7	-7.2	*
Experienced nonphysical abuse (%)	6.1	7.1	-1.0	
Experienced physical and nonphysical abuse (%)	5.0	4.8	0.2	
Mother ever abused in last 3 years (%)	49.1	59.6	-10.5	**
Maternal psychological functioning				
Depression scale	17.5	19.0	-1.5	
At high risk of clinical depression (%)	28.8	31.6	-2.8	
Parenting behavior				
Aggravation scale	1.8	1.9	-0.1	
Feeling less aggravated (%)	94.4	93.0	1.5	
Warmth scale	3.4	3.5	0.0	
Harsh-parenting scale	1.7	1.7	0.0	
Frequency of harsh parenting	2.3	2.4	-0.1	
Supervision scale	4.7	4.5	0.1	**
Sample size (total = 587)	306	281		

(continued)

Table 3.7 (continued)

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

the 36-month interview. MFIP did not have a statistically significant effect on the likelihood of having a child during the 36-month follow-up period or on cohabitation with a partner. However, it did increase the number of mothers who reported being married at the time of the interview, by 5 percentage points (from 6.2 percent for the AFDC group to 11.3 percent for the MFIP group). From information about contact with and residential status of the biological father, a measure of marriage to the biological father was constructed; MFIP did not significantly affect the incidence of marriage or residence with the biological father.

In general, the proportion of long-term recipients who were married at the 36-month follow-up point was small. Nonetheless, these impacts on marriage suggest that income measured from administrative records may not have captured all the income available to children and families in MFIP. In fact, impacts on current income measured from the survey, which includes income from other members of the household, show that the contribution of income from other earners is significantly lower for the MFIP families compared with the AFDC families.[33]

The second panel of Table 3.7 presents MFIP's impacts on domestic abuse. Recipients were asked a series of questions about their life circumstances, including whether or not intimate partners or others ever abused them (by yelling, controlling behavior, physical abuse, sexual abuse, or threats). Nearly 29 percent of AFDC recipients reported being abused by an intimate partner in the last year, and 33 percent were abused by someone other than an intimate partner. Most of the abuse by intimate partners related to current as well as ex-partners (21.5 percent), and about a quarter of the abuse by intimate partners included some kind of physical abuse. Some of the abuse by others was perpetrated by family members (24.6 percent), and some was perpetrated by unrelated individuals (28.4 percent); nearly all the abuse was physical abuse (30.7 percent). Among the AFDC group, nearly 60 percent reported being abused during the last three years. All these proportions are closely comparable to available estimates of the incidence of domestic abuse among similar populations.[34]

MFIP significantly reduced domestic abuse. Long-term recipients in MFIP were nearly 7 percentage points less likely to report having been abused by an intimate partner in the last year, a 23 percent decrease; and were 8 percentage points less likely to report having been abused by someone other than an intimate partner, a 26 percent decrease. Recipients in MFIP were also 11 percentage points less likely to have been abused during the last three years, an 18 percent decrease from AFDC recipients. MFIP significantly reduced reports of abuse by current and ex-partners as well as reports of physical abuse by unrelated individuals such as strangers and coworkers.

[33]Note that because of different incentives to report earnings and other income in the survey, income measured from the survey may be biased.

[34]Estimates of the prevalence of domestic violence among welfare recipients range from 39 to 65 percent (Raphael and Tolman, 1997). These estimates are based on four studies of female welfare recipients in New Jersey, Massachusetts, and Chicago.

The third panel of Table 3.7 shows that approximately one-third of both AFDC and MFIP mothers reported symptoms that suggested they were at high risk of clinical depression, and yet the last panel shows that over 90 percent of both groups reported that they were not highly aggravated or frustrated with aspects of parenting (see Box 3.3). AFDC and MFIP long-term recipients also scored similarly on a number of parenting measures — aggravation, warmth, harsh parenting — on outcomes measuring the extremes of these parenting measures (such as scoring above the 75th percentile or below the 25th percentile as determined based on the control group) and on combinations of these parenting measures (not shown). The only exception was mothers' supervision of their children. Recipients in MFIP scored higher on supervision and monitoring than recipients in AFDC. In general, however, MFIP had little effect on parenting behavior, and it had no effect on recipients' depression.

V. MFIP's Impacts on Child Outcomes

The results presented so far indicate that MFIP had significant and wide-ranging effects on long-term recipient families in urban counties. MFIP increased employment and income, increased the use of child care, increased marriage, and decreased the incidence of domestic abuse. As the conceptual model (Figure 1.2) indicated, each of these factors is thought to have important effects, either directly or indirectly, on children's well-being. This section presents MFIP's effects on child outcomes in three areas: social and emotional adjustment, health, and school progress. All the outcomes, with the exception of one, refer to the focal child in the family. Appendix C contains details about the construction of each outcome.

As noted earlier, an extensive amount of research has documented that several aspects of the family environment affect children's behavior and emotional well-being. For example, the emotional well-being of parents is highly predictive of parenting practices that affect children's emotional and cognitive well-being (Aber, Brooks-Gunn, and Maynard 1995; Duncan, Brooks-Gunn, and Klebanov, 1994). Family structure has also been found to affect this aspect of children's well-being; children in single-parent families experience more behavioral problems than their counterparts in two-parent families (McLanahan and Sandefur, 1994). Behavioral problems during childhood, in turn, have been found to be associated with problems in school and during young adulthood (Caspi et al., 1998). In addition, drug use and criminal activity have been found to have negative effects on youth's education and employment prospects (Freeman and Blanchflower, 1999). Several outcomes are examined that measure both positive and negative behaviors among the focal children.

Health is another aspect of children's well-being that is influenced by family resources and has important consequences for their well-being later. Children in families with low income, for example, are less likely to receive routine, preventive healthcare, and they tend to be in poorer health than children from higher-income families (Klerman, 1991). In addition, children's health may be influenced by the types of jobs their parents hold. For example, low-income parents often work in jobs that do not offer paid sick leave (Heymann and Earle, 1997). These parents may find it difficult to tend to their children's illnesses, whether or not the children are covered by health insurance. Not surprisingly, children's health status affects other aspects of their well-being, such as performance in school (Miller and Korenman, 1993)

Box 3.3

Maternal Psychological Functioning and Parenting Behavior

Measures of maternal depression and parenting behavior are based on information collected in the self-administered (Audio-CASI) portion of the child section of the 36-month survey. Details about the construction of these outcomes can be found in Appendix C.

Maternal Psychological Functioning. Maternal depression was measured from maternal responses to a 20-item CES-D (Center for Epidemiological Studies-Depression) scale (Radloff, 1977). Mothers were asked, for example, how often they "were bothered by things," "felt fearful," and "had crying spells" during the past week. Maternal responses were collected on a 4-point scale ranging from 0 ("rarely or none of the time") to 3 ("most of all of the time"). These items were summed, with a higher score indicating more depressive symptoms. The possible range of this score is 0 to 60. If the summed score was above 23, then a mother was coded as being at high risk of being clinically depressed.

Aggravation. The first measure of parenting in Table 3.7 depicts aggravation in the parenting role and includes maternal responses on a 4-point scale ranging from 1 ("none of the time") to 4 ("all of the time") to such questions as: "Is child harder to care for than most?" "Does the child do things that really bother you?" "Have you felt you are giving up more of your life to meet your child's needs?" and "Have you felt angry with your child?" A mean score of these items was created, with a higher score indicating greater aggravation. A measure of low aggravation, or "feeling less aggravated," was also created if a mother scored below 12 on the aggravation scale.

Maternal Warmth. Mothers were asked about the number of times during the past week they showed the focal child physical affection, praised the focal child for doing something worthwhile, and told another adult something positive about the focal child. These items were recoded to a scale ranging from 1 to 4, from which a mean score was created.

Harsh Parenting. Mothers were asked about the number of times during the past week that they spanked the focal child; scolded, yelled, or threatened the focal child; and got really angry with the focal child. These items were recoded to a scale ranging from 1 to 4, from which a mean score was created; in addition, the frequency of harsh parenting was measured by the maximum of the recoded items. The maximum better captures the incidence of harsh parenting if it exists in only one item. For example, a score of 3 on spanking and 0 on the other two items is an average value of 1, whereas a maximum score with a value of 3 captures the "frequency" of spanking. Greater harm may result from harsh parenting that occurs frequently than from harsh parenting that occurs only once.

Supervision. Mothers were asked how often they knew whom the focal child was with when he or she was away from home, knew where the focal child was when away from home, whether the focal child returned home on time, and whether the focal child finished any homework. For each item, mothers responded on a 5-point scale, where 1 indicated "almost never" and 5 indicated "always." A mean score of these items was created, with higher scores indicating greater parental supervision or monitoring.

The final set of outcomes relates to the focal child's performance in school, such as the child's level of engagement in school and whether he or she has ever repeated a grade. Although the children in this study were relatively young, engagement and performance in school at relatively young ages have been found to be predictive of later school success, such as high school completion (Roderick, 1993).

Table 3.8 presents MFIP's effects on children's behavior (see also Box 3.4).[35] Data for the control group provide a snapshot of how children in recipient families would fare in the absence of MFIP. For example, the average Behavioral Problems Index (BPI) for these children is 12.7. Roughly speaking, an average BPI of 12.7 means that mothers, when asked if their children exhibited any of the 28 problem behaviors, responded "sometimes true" or "often true" for fewer than half the questions. This average is within the range found for other samples of low-income children (for example, see the National Evaluation of Welfare-to-Work Strategies child study [McGroder et al., 2000]). Consistent with this average, fewer than 15 percent of children in the AFDC group exhibited a high level of behavioral and emotional problems.

A comparison of the MFIP and the AFDC groups in Table 3.8 shows that MFIP decreased the incidence of children's problem behaviors. The average BPI for the MFIP group is 11.2, compared with the AFDC average of 12.7, for a statistically significant decrease of 1.5 points. In addition, the pattern of impacts for the two subscales suggests that most of the decrease in the overall BPI reflects a decrease in the incidence of negative externalizing behaviors, from 6.0 for the AFDC group to 5.1 for the MFIP group.[36,37] Other research has also found that externalizing problem behaviors of early and middle school-age children are easier to influence by targeted child development programs on antipoverty policy than internalizing behaviors are (Bos et al., 1999; Yoshihawa, 1995). Children in the MFIP group were also less likely to have a high level of behavioral and emotional problems (6.8 percent for the MFIP group, compared with 14.5 percent for the AFDC group).

The second panel of Table 3.8 presents MFIP's impacts on the Positive Behavior Scale (PBS) and its subscales. The average value for the control group is 193.7. The PBS was also used in the evaluation of the New Chance Demonstration, a program targeted to young mothers and their children, and the average value for the control group was 197.3. The results show that MFIP did not significantly affect children's positive behavior as measured by the PBS total score and subscales.[38] Although it may seem odd for MFIP to affect the BPI and not the PBS, the latter measure is not the

[35]A number of outcomes that measure aspects of behavior besides the ones listed in Table 3.8 and Box 3.4 were also collected in the survey but are not included in this report because the incidences of these behaviors were nearly zero. Such outcomes include being a teen parent, smoking cigarettes, drinking alcohol, using drugs, and being in trouble with the police. These outcomes are more likely to reflect the behavior of older children rather than the early-school-age children who are the focus of this report.

[36]Values for the two subscores do not sum to the total score because they were constructed using only a subset of the 28 items on the BPI.

[37]MFIP also significantly decreased externalizing behavior based on an outcome constructed to be comparable to the studies in the Project on State-Level Child Outcomes, and it significantly decreased whether or not the focal child scored above the 75th percentile (determined by the distribution of this outcome in the control group) for the BPI internalizing subscore.

[38]MFIP also had no significant impact on the PBS compliance subscale that was constructed to be comparable to the studies in the Project on State-Level Child Outcomes or on outcomes measuring whether or not a child scored above the 75th percentile or below the 25th percentile (determined by the distribution of this outcome for the control group).

Table 3.8

MFIP's Impacts on Maternal Reports of Child Behavior for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)
Behavioral Problems Index			
Total score	11.2	12.7	-1.5 *
Externalizing subscore	5.1	6.0	-0.9 **
Internalizing subscore	4.1	4.5	-0.3
High level of behavioral and emotional problems (%)	6.8	14.5	-7.7 ***
Positive Behavior Scale			
Total score	194.2	193.7	0.5
Compliance subscore	81.3	79.7	1.6
Social competence subscore	58.2	59.0	-0.7
Autonomy subscore	32.0	32.7	-0.7
Behavioral problems at school			
Contacted by school about child's behavioral problems? (%)	29.8	34.6	-4.7
In special education? (%)	18.0	22.5	-4.5
Sample size (total = 587)	306	281	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

Box 3.4

Behavioral Problems and Positive Behavior

Measures of children's behavior are based on maternal responses collected in the self-administered (Audio-CASI) portion of the child section of the 36-month survey. Details about the construction of these outcomes can be found in Appendix C.

Behavioral Problems Index (BPI). Mothers responded to a series of questions designed to measure aspects of problem behavior by the focal child. The scale includes 28 items such as "My child is disobedient at home" and "My child is too fearful or anxious," and responses can vary from 0 ("not true") to 2 ("often true"). (See Peterson and Zill, 1986, for details.) A total score was created as the sum of responses to all 28 items and can range from 0 to 56, with higher values indicating more behavioral problems. The total scale can also be divided into two subscales. The externalizing subscore measures more aggressive behavioral problems, such as bullying and cheating; and the internalizing subscore measures the extent to which the child feels unhappy, anxious, or depressed.

High Level of Behavioral and Emotional Problems. Five items from the 28-item scale were used to create a scale measuring a high level of behavioral problems. Each of the five items was recoded to range from 1 to 3, so that the total score ranges from 5 to 15. A score of 10 or less on this scale indicates a high level of behavioral and emotional problems.

Positive Behavior Scale (PBS). Mothers were asked about a series of items designed to measure positive aspects of the child's behavior. This scale, developed by Polit (1996), includes 25 items such as "My child is helpful and cooperative" and "My child is cheerful and happy," and responses can range from 0 ("not at all like my child") to 10 ("completely like my child"). A total score was created as the sum of responses to the 25 items and can range from 0 to 250, with higher values indicating more positive behavior. In addition, the total scale can be divided into three subscales: compliance (for example, "My child is calm, easy going"), social competence (for example, "Shows concern for other people's feelings"), and autonomy (for example, "My child tries to do things for himself or herself, is self-reliant").

Behavioral Problems at School. The survey included two questions designed to measure behavioral problems at school. Mothers were asked whether, since random assignment, they had been contacted by the school regarding the child's behavioral problems. Mothers' responses to this question were used to create the first outcome. The second outcome was created using mothers' responses to whether the children had received special education services since random assignment, for physical, behavioral, or other problems.

mirror image of the former. The PBS is more likely to capture behavioral changes among children who are at relatively less risk for poor outcomes, or those with fewer problem behaviors.

The last panel of Table 3.8 presents measures of children's behavioral problems at school. Among the control group, 34.6 percent of mothers reported that they had been contacted by the school about their child's behavior, and 22.5 percent reported that their child had spent some time in special education. MFIP reduced mothers' reports of both these behaviors, but the differences compared with the AFDC group are not statistically significant.

Table 3.9 presents MFIP's effects on children's health and academic functioning. Mothers were asked to rate the focal child's health, and their responses could range from 1 ("excellent") to 5 ("poor"). Children who received a rating of 1 ("excellent") or 2 ("very good") were defined as in good health. As shown in the top panel of the table, the majority of mothers in the AFDC group reported that their children were in very good or excellent health (77.8 percent). This number is comparable to mothers' ratings in both the New Chance and the NEWWS evaluations (Quint, Bos, and Polit, 1997; McGroder et al., 2000). Data for the MFIP and AFDC groups show that the program had no significant effects on children's reported health. Mother's ratings may be somewhat limited as an objective measure of children's health, because ratings may not have captured more subtle aspects of health status. Better measures, for example, might be nutritional intake, access to health care, or chronic health conditions, such as asthma. Nonetheless, the survey contains several other items designed to measure children's health, such as the timing of the last visits to a doctor or dentist, and MFIP did not affect any of these other measures (not shown).

Mothers were also asked whether *any* child in the household had had an accident or injury since random assignment that required a visit to an emergency room or clinic. A result that is inconsistent with MFIP's other beneficial effects on children is that MFIP increased the percentage of mothers who reported this — 44 percent of the MFIP mothers compared with 36.9 percent of the AFDC mothers, for an increase of 7.1 percentage points. Because this outcome is not specific to the focal child, it is difficult to assess whether focal children or their siblings are more likely to be taken to an emergency room or clinic. This measure was intended to capture the health and safety of children, as affected by the home environment, for example, or the amount of parental supervision. There are a number of plausible hypotheses about why MFIP increased reports of taking children to an emergency room or clinic, due to an accident or injury. MFIP mothers, because they were more likely to have worked during the follow-up period, may have provided less supervision for their children; or working mothers may be more likely to use evening or weekend services, which tend to be cast by health care providers as emergency care. The amount of time a child spends in nonparental care may also influence the number of accidents or injuries. On the other hand, this measure may also capture mothers' ability to purchase health care, through higher income or more continuous health insurance, both of which MFIP affected. Mothers with higher incomes or less time without health care may be more likely to take their children to clinics or emergency rooms in the event of an accident or injury. This outcome is not highly correlated with health insurance coverage, employment, income, or, as will be shown in Chapter 4, child care.

Table 3.9

MFIP's Impacts on Maternal Reports of Children's Health and Academic Functioning for Long-Term Recipients in Urban Counties

Outcome	MFIP	AFDC	Difference (Impact)
Health and safety			
Child's health rated by mother as very good or excellent (%)	75.0	77.8	-2.8
Any child have accident/injury that required a visit to an emergency room or clinic? (%)	44.0	36.9	7.1 *
Academic functioning			
Performance in school	4.1	4.0	0.2 *
Performance in school below average (%)	7.2	12.3	-5.1 **
Engagement in school	10.2	9.9	0.3 **
Ever repeated a grade? (%)	5.4	3.6	1.8
Ever suspended/expelled? (%)	11.4	12.9	-1.5
Sample size (total = 587)	306	281	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

Box 3.5

Children's Academic Functioning

Measures of children's academic functioning were collected in the core section of the survey. Details about the construction of these outcomes can be found in Appendix C.

Performance in School. Mothers were asked to gauge their children's performance in school by responding to the following question: "Based on your knowledge of the child's schoolwork, including report cards, how has he or she been doing in school overall?" Responses could range from 1 ("not well at all") to 5 ("very well"). The responses to these questions were used to construct two outcomes. The first outcome is the rating provided by the mother. This rating ranges from 1 to 5, and a higher number indicates better school performance. The second outcome focuses on poor performance in school; children with ratings of 1 ("not well at all") or 2 ("below average") are defined as performing below average. This second measure is included to capture MFIP's effects at different points in the distribution of school performance. For example, MFIP's positive effects on children may be concentrated among, or strongest for, children at highest risk for poor outcomes. Focusing on changes in average performance may not fully capture this effect.

Engagement in School. Mothers were asked four questions about their child's level of engagement in school (for example, "My child cares about doing well in school"). Their responses could range from 1 ("not true") to 3 ("often true"). The child's engagement in school is measured by the sum of the mother's responses. This sum can range from 4 to 12, with a higher number indicating a higher level of engagement.

Grade Repetition. Mothers were asked whether the focal child had repeated a grade since the parent entered the evaluation (or random assignment).

Suspension/Expulsion. Mothers were asked whether the focal child had been suspended or expelled from school since the parent entered the evaluation.

The bottom panel of Table 3.9 presents data on academic functioning (see Box 3.5). On average, mothers in the control group rated their children's performance in school as "above average," or a value of 4. Not surprisingly, then, very few of the mothers (12.3 percent) rated their children's performance as below average. MFIP increased children's performance in school, largely by decreasing the percentage who were performing poorly — only 7.2 percent of MFIP mothers reported that their children were performing poorly in school, for a statistically significant decrease of 5.1 percentage points. MFIP also increased children's engagement in school (10.2 for the MFIP group versus 9.9 for the AFDC group), but it had no significant effects on grade repetition or suspensions/expulsions.

In sum, children in MFIP families had fewer behavioral problems, as measured by the BPI, and they performed better and were more engaged in school than their counterparts in AFDC families.

MFIP did not affect other aspects of their behavior in school, such as time in special education or grade repetition. The BPI and PBS measures undoubtedly capture more subtle changes in children's behavior than do special education and grade repetition, and it may be that MFIP was not a strong enough intervention to affect the latter types of outcomes. On the other hand, noticeable changes in school behavior may arise only in the longer term, which cannot be captured with just three years of follow-up.

VI. MFIP's Impacts on Selected Subgroups: Preschool-Age and School-Age Children; Girls and Boys; Blacks, Whites, and Other Ethnic Groups; and More Disadvantaged Families

This section presents MFIP's impacts on child outcomes for subgroups defined by (1) the age of the focal child, (2) the gender of the focal child, (3) the family's race/ethnicity, and (4) the level of family disadvantage. The results presented so far indicate that on average MFIP affected various measures of family and child well-being for long-term recipients. These average impacts for all families, however, may mask positive or negative effects that MFIP had on certain types of families. MFIP's impacts may be moderated, for example, by characteristics of the child, characteristics of the family, or characteristics of the local environment. The characteristics may affect each aspect of the conceptual model.

Tables 3.10 to 3.16 present selected measures of direct outcomes, intermediate outcomes, and child outcomes for each classification of a subgroup, for example, for girls and for boys. The right-hand column of each table presents the p-values calculated from split-sample tests, showing whether the impact for one subgroup is significantly different from the impact for the other subgroup. For example, a p-value of .10 or less indicates that the impact of MFIP on an outcome for girls is significantly different from the impact on this same outcome for boys.

A. Comparison of MFIP's Impacts on Child Outcomes for Preschool-Age and School-Age Children

Table 3.10 presents MFIP's impacts on focal children who were preschool-age (younger than 6) and focal children who were school-age (6 or older) at random assignment. Long-term recipients with preschool-age children may have reacted differently to MFIP than long-term recipients with school-age children, depending on the availability, affordability, and quality of child care. Or, given a similar effect of MFIP on mothers' employment, preschool-age children may have reacted differently than school-age children. On a more pragmatic level, MFIP's impacts on school functioning in this study are better captured for focal children who were school-age throughout the 36-month follow-up period.

The effects of MFIP on child outcomes were most pronounced for school-age focal children, who were 6 or older at random assignment. Furthermore, MFIP's effects on children's behavior, based on both the BPI and the PBS, were significantly different for school-age than for preschool-age children (see right-hand column). School-age children in MFIP families had fewer behavior problems, scored higher in school engagement, and performed better in school than did school-age children in AFDC families.

The patterns of MFIP's impacts on direct outcomes and intermediate outcomes suggest ways in which MFIP may have affected school-age children differently than younger children.

Table 3.10

MFIP's Impacts on Child Outcomes by Child's Age for Long-Term Recipients in Urban Counties

Outcome	Focal Child Younger Than Age 6 at Random Assignment			Focal Child Age 6 or Older at Random Assignment			p-Value for Subgroup Differences
	MFIP	AFDC	Impact (Difference)	MFIP	AFDC	Impact (Difference)	
Direct Outcomes							
Average quarterly employment rate (%)	76.5	59.0	17.4 ***	66.2	55.6	10.6 **	0.34
Average annual income ($)	12,340	10,483	1,857 ***	10,694	10,087	607	0.09 *
Intermediate Outcomes							
Currently married and living with spouse (%)	9.2	6.9	2.4	15.6	5.2	10.4 **	0.13
Used formal child care (%)	60.9	49.6	11.2 **	40.8	25.2	15.5 **	0.55
Used informal child care (%)	77.8	69.9	7.9 *	71.6	60.6	11.0	0.72
Mother at high risk of clinical depression (%)	30.6	25.4	5.1	24.7	44.3	-19.6 ***	0.00 ***
Mother ever abused in last 3 years (%)	53.7	57.6	-3.8	40.4	64.5	-24.1 ***	0.04 **
Total HOME score	75.6	76.3	-0.8	76.0	73.8	2.1 *	0.05 *
Child Outcomes							
Behavioral Problems Index	10.9	11.5	-0.7	11.5	15.4	-3.9 **	0.08 *
Positive Behavior Scale	193.9	197.3	-3.5	195.5	186.4	9.1	0.08 *
Engagement in school	10.3	10.1	0.2	10.0	9.4	0.6 *	0.30
Performance in school	4.3	4.2	0.1	3.9	3.5	0.4 **	0.23
Sample size (total = 587)	193	195		113	86		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

A statistical test was conducted to measure whether impacts presented for the different subgroups in this table are statistically different from one another. The p-value represents the probability that apparent variation in impacts across subgroups of these tables is simply the result of random chance. If this probability is less than 10 percent, the variation in impacts is considered statistically significant.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

Surprisingly, the average employment rate for AFDC recipients with younger children (59 percent) is similar to that for AFDC recipients with school-age children (55.6 percent). MFIP increased employment during the 36-month follow-up period for both sets of long-term recipients. However, MFIP significantly increased annual earnings and, thus, annual income only for long-term recipients with younger children.

In terms of intermediate outcomes, MFIP had similar effects on the use of formal and informal child care for both types of long-term recipients. However, for school-age children, MFIP significantly improved the quality of the home environment and significantly decreased mothers' depression, compared with AFDC families. The proportion of AFDC mothers who had older children and were at high risk of clinical depression (44 percent) is particularly striking. MFIP also significantly decreased these mothers' reports of domestic abuse, from 65 to 40 percent.

Analyzing MFIP's impacts by the age of the focal child suggests two interesting patterns. First, it appears that long-term recipients with school-age children experienced more benefits from MFIP in terms of intermediate outcomes; fewer were at high risk of clinical depression, and fewer reported domestic abuse at the 36-month follow-up point. MFIP also increased the quality of the home environment for the school-age children. Second, it appears that long-term recipients with preschool-age children responded to MFIP more positively than mothers of older children in terms of their employment and earnings behavior. According to the survey's child outcome measures, preschool-age children were not affected negatively or positively by these changes.

It is important to note that having a school-age child may be associated with other family characteristics. For example, recipients with school-age children are more likely than mothers of older children to have been on welfare for five years or more at random assignment, and they are more likely to be divorced. As Section D reveals, MFIP's impacts for the subgroup of recipients on welfare for five years or more are similar though not identical to MFIP's impacts for the subgroup of recipients with school-age children.

B. Comparison of MFIP's Impacts on Child Outcomes for Girls and Boys

Table 3.11 presents MFIP's impacts on child outcomes according to the gender of the focal children. MFIP may have affected girls differently than boys for a number of reasons: (1) mothers may simply prefer to invest in girls rather than boys, or vice versa, because the return on the investment is higher; (2) girls and boys in general may fare differently on a number of child outcomes, and, therefore, MFIP may have been more likely to affect whichever gender has greater room for improvement; or (3) girls and boys may react differently to increases in maternal employment or other outcomes that MFIP may have affected. The evaluation of Milwaukee's New Hope Project found that the program significantly improved the classroom behavior and school achievement of young boys and that these effects were significantly different from the effects on young girls. The New Hope findings further suggest that mothers used their increased income to invest in after-school activities primarily to prevent their boys from engaging in high-risk behavior.

The bottom panel of Table 3.11 shows MFIP's impacts on child outcomes. Note that girls and boys in AFDC families fared similarly, on average, based on the Behavioral Problems Index (BPI), the Positive Behavior Scale (PBS), school engagement, and school performance. The av-

Table 3.11

MFIP's Impacts on Child Outcomes by Child's Gender for Long-Term Recipients in Urban Counties

Outcome	Girls MFIP	Girls AFDC	Girls Impact (Difference)	Boys MFIP	Boys AFDC	Boys Impact (Difference)	p-Value for Subgroup Differences
Direct Outcomes							
Average quarterly employment rate (%)	74.0	58.0	16.0 ***	73.5	57.7	15.8 ***	1.00
Average annual income ($)	11,976	10,120	1,856 ***	11,732	10,737	994 *	0.46
Intermediate Outcomes							
Currently married and living with spouse (%)	7.8	6.1	1.7	15.3	6.2	9.1 **	0.48
Used formal child care (%)	52.5	39.0	13.6 **	53.1	45.3	7.8	0.66
Used informal child care (%)	77.6	64.7	12.9 **	73.9	69.4	4.5	0.37
Mother at high risk of clinical depression (%)	30.0	30.3	-0.3	27.2	32.8	-5.7	0.68
Mother ever abused in last 3 years (%)	46.0	53.9	-7.9	51.6	65.4	-13.8 **	0.80
Total HOME score	76.0	75.9	0.0	75.4	75.1	0.2	0.95
Child Outcomes							
Behavioral Problems Index	10.2	12.4	-2.3 **	12.3	12.8	-0.5	0.57
Positive Behavior Scale	198.6	191.6	7.0	191.3	194.6	-3.2	0.28
Engagement in school	10.4	10.0	0.4 *	10.0	9.7	0.3	0.77
Performance in school	4.2	4.2	0.0	4.1	3.8	0.3 **	0.43
Sample size (total = 573)	141	140		157	135		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

A statistical test was conducted to measure whether impacts presented for the different subgroups in this table are statistically different from one another. The p-value represents the probability that apparent variation in impacts across subgroups of these tables is simply the result of random chance. If this probability is less than 10 percent, the variation in impacts is considered statistically significant.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

erage BPI score for girls, for example, is 12.4, compared with 12.8 for boys. Yet for girls MFIP significantly decreased behavior problems and improved engagement in school. MFIP's impact on the PBS was also positive for girls, whereas for boys MFIP's impact on the PBS was negative. Note that even though the positive effects of MFIP on child outcomes were more pronounced for girls, none of these impacts is significantly different from the impacts for boys (see right-hand column).

MFIP's effects on direct and intermediate outcomes also were not significantly different for families with girls than for families with boys. However, MFIP significantly increased the use of formal and informal child care for girls. MFIP boys also experienced increases in formal and informal child care, but not nearly as much as did girls. On the other hand, only the mothers of MFIP boys showed a significant decrease in domestic abuse, relative to their AFDC counterparts. In summary, although MFIP had more pronounced effects on girls than boys, these effects are not significantly different, and it is not clear, based on the impacts on the direct and intermediate outcomes, which pathways may have led to these different effects on child outcomes for girls and boys.

C. Comparison of MFIP's Impacts on Child Outcomes for Blacks, Whites, and Other Ethnic Groups

Table 3.12 presents MFIP's impacts on child outcomes according to the race or ethnicity of the mother. The racial/ethnic categories are presented as black, white, and other ethnic groups that include Asian/Pacific Islanders, Hispanics, and Native Americans. MFIP may have affected racial/ethnic subgroups differently for a number of reasons: (1) MFIP's impacts on the direct outcomes of employment and income may have differed by racial/ethnic subgroup if discrimination in the workplace makes it more difficult for a particular subgroup to obtain employment; (2) MFIP's effects on such intermediate outcomes as child care and marriage may have differed by racial/ethnic subgroup if different cultural values affect the types of child care used or whether a single mother gets married; or (3) levels of child well-being may generally vary across racial/ethnic subgroups, leaving less room for MFIP to have improved or had other effects on child outcomes.

The last panel of Table 3.12 presents MFIP's impacts on child outcomes across racial/ethnic subgroups. It is important to note that the sample sizes for other ethnic groups are extremely small. Despite the small sample sizes, white children in the AFDC group performed worse on the BPI and the PBS than either black children or children of other ethnicities in the AFDC group. In contrast, white children in the AFDC group appear to have performed slightly better on measures of engagement in school and performance in school compared with black children and children of other ethnicities in the AFDC group. MFIP generally had few systematic effects on child outcomes by racial/ethnic subgroups, except that MFIP increased school engagement for black children and children of other ethnicities.

Compared with the pattern of effects on child outcomes, the pattern of MFIP's effects on intermediate outcomes shows greater variation across racial/ethnic subgroups. MFIP increased the use of formal and informal child care (by 10.7 and 12.7 percentage points, respectively) for black children, but it increased the use only of formal child care for white children and had a negative but statistically insignificant effect on formal child care for children of other ethnicities.

Table 3.12

MFIP's Impacts on Child Outcomes by Race/Ethnicity for Long-Term Recipients in Urban Counties

Outcome	Black MFIP	Black AFDC	Black Impact (Difference)	White MFIP	White AFDC	White Impact (Difference)	Other Ethnic Groups MFIP	Other Ethnic Groups AFDC	Other Ethnic Groups Impact (Difference)	p-Value for Subgroup Differences
Direct Outcomes										
Average quarterly employment rate (%)	70.6	61.0	9.7 **	77.8	57.7	20.2 ***	61.7	47.2	14.5	0.26
Average annual income ($)	12,006	10,526	1,479 ***	11,648	10,485	1,163 **	10,866	10,067	798	0.82
Intermediate Outcomes										
Currently married and living with spouse (%)	7.6	3.0	4.6	15.7	9.5	6.1	12.4	1.7	10.7	0.73
Used formal child care (%)	46.0	35.3	10.7 *	65.4	51.3	14.1 **	29.7	33.0	-3.4	0.45
Used informal child care (%)	77.4	64.7	12.7 **	72.2	72.0	0.2	76.5	66.1	10.4	0.30
Mother at high risk of clinical depression (%)	32.0	33.8	-1.8	23.9	30.1	-6.2	36.6	30.0	6.6	0.68
Mother ever abused in last 3 years (%)	52.8	62.4	-9.7	50.7	60.3	-9.6	32.1	49.7	-17.6	0.89
Total HOME score	74.7	74.8	-0.1	76.7	77.3	-0.6	74.1	73.2	0.9	0.81
Child Outcomes										
Behavioral Problems Index	10.5	12.1	-1.6	12.4	13.2	-0.9	8.9	11.3	-2.4	0.85
Positive Behavior Scale	199.8	197.5	2.3	185.2	192.1	-6.9	208.7	197.7	11.0	0.19
Engagement in school	10.3	9.8	0.5 **	10.0	9.9	0.1	10.8	9.7	1.0 **	0.13
Performance in school	4.2	4.0	0.2	4.1	4.0	0.1	4.2	3.8	0.3	0.67
Sample size (total = 576)	120	119		137	120		39	41		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

A statistical test was conducted to measure whether impacts presented for the different subgroups in this table are statistically different from one another. The p-value represents the probability that apparent variation in impacts across subgroups of these tables is simply the result of random chance. If this probability is less than 10 percent, the variation in impacts is considered statistically significant.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

The pattern of effects on other intermediate outcomes is generally similar across racial/ethnic subgroups, with the exception of mothers' being at high risk of clinical depression; though not significant, MFIP had a negative effect on this outcome for black mothers and white mothers but a positive effect for mothers of other ethnicities.

Finally, Table 3.12 shows that MFIP's effects on the direct outcomes of employment and income were quite similar across racial/ethnic subgroups. Though MFIP did not have statistically significant effects on employment and income for single mothers of other ethnic groups, these impacts are still large and are comparable to MFIP's impacts for black mothers and white mothers.

In summary, MFIP had few systematically different effects on children in various racial/ethnic subgroups. However, despite small sample sizes, MFIP did improve school engagement of black children and children of other ethnicities. These results also provide some weak evidence that effects on child outcomes by racial/ethnic subgroup are more likely to be driven by differing effects on intermediate outcomes — such as child care, marriage, and maternal depression — than by effects on the direct outcomes of employment and income.

D. MFIP's Impacts on Child Outcomes for More Disadvantaged Families

This section presents MFIP's effects on children in more disadvantaged families, whose mothers faced potential barriers to employment, and it seeks to answer two questions. First, did MFIP affect employment, earnings, and welfare benefits differently for more disadvantaged families than for others and, thus, affect child outcomes differently? Although the full sample of long-term recipients might be considered disadvantaged, some were probably more job-ready than others. For example, about half the parents did not have a high school diploma, some had very limited work experience, and many had been receiving welfare for more than five years when they entered the evaluation. It is easy to imagine that MFIP might have affected such recipients differently. The interim report found, for example, that the employment and earnings impacts differed by parents' education level and welfare history (Miller et al., 1997).

Second, did MFIP have similar effects on employment for all mothers, but because mothers in more disadvantaged families may have been less equipped to deal with the added pressure of employment, were their children affected negatively? For example, MFIP might have produced similar impacts on adult outcomes in all families, but more disadvantaged mothers with no high school diploma and little prior work experience might have found the transition to work more difficult and more stressful than other mothers.

Several subgroups were defined according to characteristics that have been found to be associated with employment outcomes: welfare history, earnings history, educational attainment, and barriers to employment. Table 3.13 presents MFIP's impacts on child outcomes for families according to prior welfare receipt. Data for the two control groups show that prior welfare receipt is associated with several outcomes during the follow-up period. For example, the AFDC group with more than five years of welfare receipt had a lower employment rate than the other AFDC group (53.6 percent versus 62.7 percent), a higher incidence of domestic abuse, and poorer behavioral and schooling outcomes for their children (for example, an average BPI of 14.8, compared with 10.8).

MFIP produced larger and statistically significant changes in child outcomes for the group with a longer history of welfare receipt; children's behavioral problems were lower in MFIP fami-

Table 3.13

MFIP's Impacts on Child Outcomes by Welfare History of Mother for Long-Term Recipients in Urban Counties

Outcome	On AFDC for More Than 5 Years Prior to Random Assignment			On AFDC for Less Than 5 Years Prior to Random Assignment			p-Value for Subgroup Differences
	MFIP	AFDC	Impact (Difference)	MFIP	AFDC	Impact (Difference)	
Direct Outcomes							
Average quarterly employment rate (%)	68.5	53.6	14.8 ***	76.7	62.7	14.0 ***	0.87
Average annual income ($)	11,466	10,328	1,138 **	11,907	10,314	1,593 ***	0.53
Intermediate Outcomes							
Currently married and living with spouse (%)	11.0	6.0	5.0	12.5	7.6	4.9	1.00
Used formal child care (%)	42.7	31.2	11.6 **	63.0	57.5	5.5	0.39
Used informal child care (%)	72.9	62.3	10.6 *	77.8	74.2	3.6	0.38
Mother at high risk of clinical depression (%)	29.1	36.4	-7.3	25.8	28.3	-2.5	0.54
Mother ever abused in last 3 years (%)	45.1	62.7	-17.6 ***	55.1	53.8	1.3	0.04 **
Total HOME score	74.8	74.2	0.6	77.1	76.9	0.2	0.79
Child Outcomes							
Behavioral Problems Index	12.0	14.8	-2.8 **	10.6	10.8	-0.2	0.13
Positive Behavior Scale	192.8	187.7	5.1	195.4	199.5	-4.1	0.19
Engagement in school	10.1	9.4	0.7 ***	10.4	10.2	0.2	0.10
Performance in school	4.0	3.7	0.3 *	4.3	4.2	0.0	0.23
Sample size (total = 565)	167	135		126	137		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

A statistical test was conducted to measure whether impacts presented for the different subgroups in this table are statistically different from one another. If this probability is less than 10 percent, the variation in impacts is considered statistically significant.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

lies, and their positive behavior and engagement in school were higher. In addition, most of these differences in impacts approach statistical significance (see right-hand column). In terms of the direct outcomes, both MFIP groups experienced similar changes in income and in employment rates. The group with a longer welfare receipt history also experienced larger increases in child care use and a dramatic decrease in domestic abuse (-17.6 percentage points). MFIP's impacts on domestic abuse for these two subgroups are significantly different (see right-hand column).

Table 3.14 presents MFIP's impacts on child outcomes according to the mother's earnings history. The differences in outcomes for the two control groups are not as pronounced by prior earnings as they are by prior welfare receipt. The most notable difference is in employment rates during the follow-up period — 39.4 percent for AFDC mothers with no prior earnings versus 82.7 percent for AFDC mothers with prior earnings. In addition, recipients in the AFDC group with prior earnings had somewhat higher levels of depression and domestic abuse. The differences in impacts are also not as consistent by prior earnings as by prior welfare receipt. First, with respect to child outcomes, the impacts for both groups are similar. Second, although MFIP's impact on employment was substantially larger for the group without prior earnings, its impacts on the intermediate outcomes are not consistently larger for this group. For example, the MFIP group with no prior earnings showed a 26.1 percentage point increase in employment rate and a 13.8 percentage point increase in formal child care use, compared with impacts of only 1.4 and 4.8 percentage points for the MFIP group with prior earnings. However, the group with prior earnings showed relatively larger decreases in depression and domestic abuse.

Table 3.15 presents MFIP's impacts on child outcomes according to the mother's educational attainment. The notable differences in outcomes for the AFDC families between the two groups are in employment rates and average income, with the more educated group having higher employment rates and incomes. MFIP had more consistently positive impacts on child outcomes for the more educated group, although none of these differences between the groups is statistically significant. The impacts on the direct outcomes are similar in size across the two groups. Impacts on child care, depression, and domestic abuse are somewhat larger for the more educated mothers, whereas impacts on marriage are larger for the less educated mothers. Note again that none of the differences in impacts is statistically significant.

Finally, Table 3.16 presents impacts for three subgroups defined by the number of potential barriers to employment that parents faced, where the barriers are defined based on the previous three tables — long-term welfare receipt, no earnings in the prior year, and no high school diploma. Recent research has found that, while the type of barrier that an individual presents affects employment outcomes, the number of barriers may be equally important (Danziger et al., 1999). For example, while mothers who have not completed high school may have difficulty finding a job, their employment prospects may be worsened if they also have limited work experience. The results for these groups show that, although outcomes and impacts on employment and income vary with the number of barriers, the pattern for intermediate outcomes is less consistent. In contrast, MFIP's impacts on child outcomes are the most positive and consistent for the group with two or three barriers.

The results of this subgroup analysis of more disadvantaged families suggest two points. First, low education and limited work experience may be more important barriers to work than is

Table 3.14

MFIP's Impacts on Child Outcomes by Earnings History of Mother for Long-Term Recipients in Urban Counties

Outcome	Recipient Had No Earnings in Year Prior to Random Assignment			Recipient Had Earnings in Year Prior to Random Assignment			p-Value for Subgroup Differences
	MFIP	AFDC	Impact (Difference)	MFIP	AFDC	Impact (Difference)	
Direct Outcomes							
Average quarterly employment rate (%)	65.5	39.4	26.1 ***	84.1	82.7	1.4	0.00 ***
Average annual income ($)	11,313	9,680	1,633 ***	12,151	11,334	817	0.26
Intermediate Outcomes							
Currently married and living with spouse (%)	10.7	6.8	3.9	12.7	5.6	7.1 *	0.55
Used formal child care (%)	56.0	42.3	13.8 ***	47.2	42.4	4.8	0.27
Used informal child care (%)	75.6	67.4	8.3	75.5	69.9	5.6	0.80
Mother at high risk of clinical depression (%)	32.3	29.8	2.5	23.2	35.0	-11.7 *	0.06 *
Mother ever abused in last 3 years (%)	49.1	54.4	-5.3	48.5	64.7	-16.2 **	0.23
Total HOME score	75.8	76.1	-0.2	75.3	74.6	0.7	0.50
Child Outcomes							
Behavioral Problems Index	11.2	13.0	-1.8 *	11.5	12.5	-1.0	0.63
Positive Behavior Scale	195.7	192.2	3.5	192.0	194.2	-2.2	0.41
Engagement in school	10.3	10.0	0.2	10.1	9.6	0.6 **	0.32
Performance in school	4.1	4.0	0.2	4.1	3.9	0.2	0.96
Sample size (total = 587)	180	162		126	119		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

A statistical test was conducted to measure whether impacts presented for the different subgroups in this table are statistically different from one another. If this probability is less than 10 percent, the variation in impacts is considered statistically significant.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

Table 3.15

MFIP's Impacts on Child Outcomes by Educational Attainment of Mother for Long-Term Recipients in Urban Counties

Outcome	Recipient Does Not Have a High School Diploma or Equivalent			Recipient Has a High School Diploma or Equivalent			p-Value for Subgroup Differences
	MFIP	AFDC	Impact (Difference)	MFIP	AFDC	Impact (Difference)	
Direct Outcomes							
Average quarterly employment rate (%)	61.3	44.4	16.9 ***	77.7	63.6	14.1 ***	0.66
Average annual income ($)	10,866	9,231	1,635 ***	12,058	10,825	1,233 ***	0.58
Intermediate Outcomes							
Currently married and living with spouse (%)	12.0	2.6	9.4 **	10.8	6.7	4.1	0.36
Used formal child care (%)	36.0	25.7	10.3	60.2	48.6	11.6 **	0.81
Used informal child care (%)	67.7	66.5	1.2	78.1	68.2	9.9 **	0.32
Mother at high risk of clinical depression (%)	36.8	34.8	2.0	26.0	30.0	-3.9	0.53
Mother ever abused in last 3 years (%)	49.9	56.0	-6.2	50.1	61.6	-11.6 **	0.56
Total HOME score	73.2	72.9	0.3	76.7	76.7	0.0	0.84
Child Outcomes							
Behavioral Problems Index	12.1	12.2	-0.1	10.6	12.9	-2.2 **	0.24
Positive Behavior Scale	191.5	195.1	-3.7	195.7	193.2	2.4	0.46
Engagement in school	10.3	9.8	0.5 *	10.2	9.9	0.3	0.47
Performance in school	4.1	4.0	0.1	4.1	3.9	0.2 **	0.62
Sample size (total = 583)	105	74		200	204		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

A statistical test was conducted to measure whether impacts presented for the different subgroups in this table are statistically different from one another. If this probability is less than 10 percent, the variation in impacts is considered statistically significant.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

Table 3.16

MFIP's Impacts on Child Outcomes by Barriers to Employment for Long-Term Recipients in Urban Counties

Outcome	Recipient Has Two or Three Barriers to Employment: MFIP	AFDC	Impact (Difference)	Recipient Has One Barrier to Employment: MFIP	AFDC	Impact (Difference)	Recipient Has No Barrier to Employment: MFIP	AFDC	Impact (Difference)	p-Value for Subgroup Differences
Direct Outcomes										
Average quarterly employment rate (%)	61.4	40.2	21.2 ***	79.8	64.3	15.5 ***	84.7	87.9	-3.2	0.00 ***
Average annual income ($)	11,073	9,708	1,365 ***	11,931	10,606	1,325 **	12,425	11,702	723	0.86
Intermediate Outcomes										
Currently married and living with spouse (%)	11.1	4.7	6.4 *	11.7	9.1	2.6	15.4	2.8	12.6 **	0.38
Used formal child care (%)	40.5	34.5	6.1	65.8	42.7	23.1 ***	56.4	68.0	-11.6	0.01 **
Used informal child care (%)	70.7	64.6	6.1	79.1	70.0	9.1	79.8	78.0	1.8	0.83
Mother at high risk of clinical depression (%)	33.3	33.0	0.4	29.4	32.6	-3.1	10.9	26.4	-15.5	0.41
Mother ever abused in last 3 years (%)	46.7	59.4	-12.7 *	55.5	57.1	-1.5	42.1	61.7	-19.6	0.34
Total HOME score	74.3	73.8	0.5	76.5	77.2	-0.7	78.5	76.0	2.5	0.26
Child Outcomes										
Behavioral Problems Index	11.8	14.4	-2.5 *	11.0	11.8	-0.7	8.5	11.8	-3.3	0.48
Positive Behavior Scale	194.1	186.8	7.4	195.2	197.8	-2.6	195.3	196.0	-0.7	0.40
Engagement in school	10.3	9.6	0.7 ***	10.1	10.0	0.1	10.5	9.8	0.7	0.17
Performance in school	4.1	3.9	0.2	4.1	3.9	0.2	4.2	4.2	0.0	0.68
Sample size (total = 578)	150	112		110	121		41	44		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

A statistical test was conducted to measure whether impacts presented for the three different subgroups in this table are statistically different from each another. If this probability is less than 10 percent, the variation in impacts is considered statistically significant.

Barriers are defined as: receiving welfare for more than five years prior to random assignment, not having any earnings in the year prior to random assignment, and not having a high school diploma.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See text and Appendix C for details regarding the construction of outcomes.

prior welfare receipt. The subgroup with five years of prior welfare receipt had higher employment rates during the follow-up period than the subgroups with low education and limited work experience. In addition, all three of the more disadvantaged subgroups experienced substantial impacts on employment during the follow-up period, but these changes led to consistent, positive effects on intermediate and child outcomes only for the subgroup that had received welfare for more than five years. This suggests that the subgroups with low education and limited work experience may have had more difficulty adjusting to employment changes.

The second point is that MFIP did not produce any *negative* effects for disadvantaged families. Despite the very large changes in employment behavior for all the disadvantaged subgroups, none of the subgroups showed negative effects on mothers' or children's well-being. (MFIP's effects were also examined for subgroups defined by other possible barriers to employment, such as having several children or emotional or health problems, and no negative impacts were found.) This suggests that MFIP's employment-related services, coupled with its financial incentives, may ease the transition to work for low-income mothers.

VII. Conclusion

This chapter has presented MFIP's effects on long-term recipients' employment behavior, earnings, income, and resources as well as a variety of measures of family and child well-being. MFIP significantly affected a number of these outcomes and, ultimately, improved children's behavior and academic functioning. The conceptual model presented in Figure 3.1 proposed some ways by which MFIP may have improved these child outcomes. It appears that MFIP affected multiple aspects of long-term recipients' lives via changes in their resources and changes in their socialization, and some of these effects, in turn, may have affected children's well-being. To better identify the pathways through which MFIP may have improved children's well-being, Chapter 4 will decompose the impacts of MFIP's financial incentives from the impacts of adding employment-related services.

Chapter 4

Understanding MFIP's Effects on the Children of Long-Term Recipients in Urban Counties

The full intervention of the Minnesota Family Investment Program (MFIP) reduced children's behavior problems and improved their academic functioning. The goal in this chapter is to better understand these impacts. First, how did each component of the MFIP intervention contribute to the program's impacts on child outcomes? Second, how did MFIP's increase in family income affect children, compared with its increase in mothers' employment?

Recall that MFIP's research design was based on three groups described in Chapter 1: full MFIP, MFIP Incentives Only, and AFDC (Aid to Families with Dependent Children). The three-group design makes it possible to address these questions by separately examining the effects of MFIP's financial incentives and the effects of coupling the mandatory services with the incentives and — to some extent — to untangle the effects of income from the effects of employment.

I. Decomposing the MFIP Intervention: Separating the Effects of Financial Incentives from the Effects of Adding Mandatory Services

A. Summary of the Main Findings

Figures 4.1 and 4.2 graphically present the significant effects on various outcomes of MFIP's financial incentives alone and the effects of adding mandatory employment-related services to the incentives. The outcomes are categorized as in the conceptual model presented in Chapter 1 (Figure 1.2).

MFIP's Financial Incentives. MFIP's financial incentives allowed welfare recipients to keep more of their welfare benefits as their earned income increased. It is important to keep in mind that recipients who responded to these incentives by entering employment did so voluntarily. It is also important to keep in mind that those who were already working received additional income ("windfalls") for no extra hours of work and that the source of this extra income was public assistance; some working recipients may have cut back work effort in response to financial incentives. The effects of MFIP's incentives alone are obtained by comparing outcomes for the MFIP Incentives Only group with outcomes for the AFDC group.

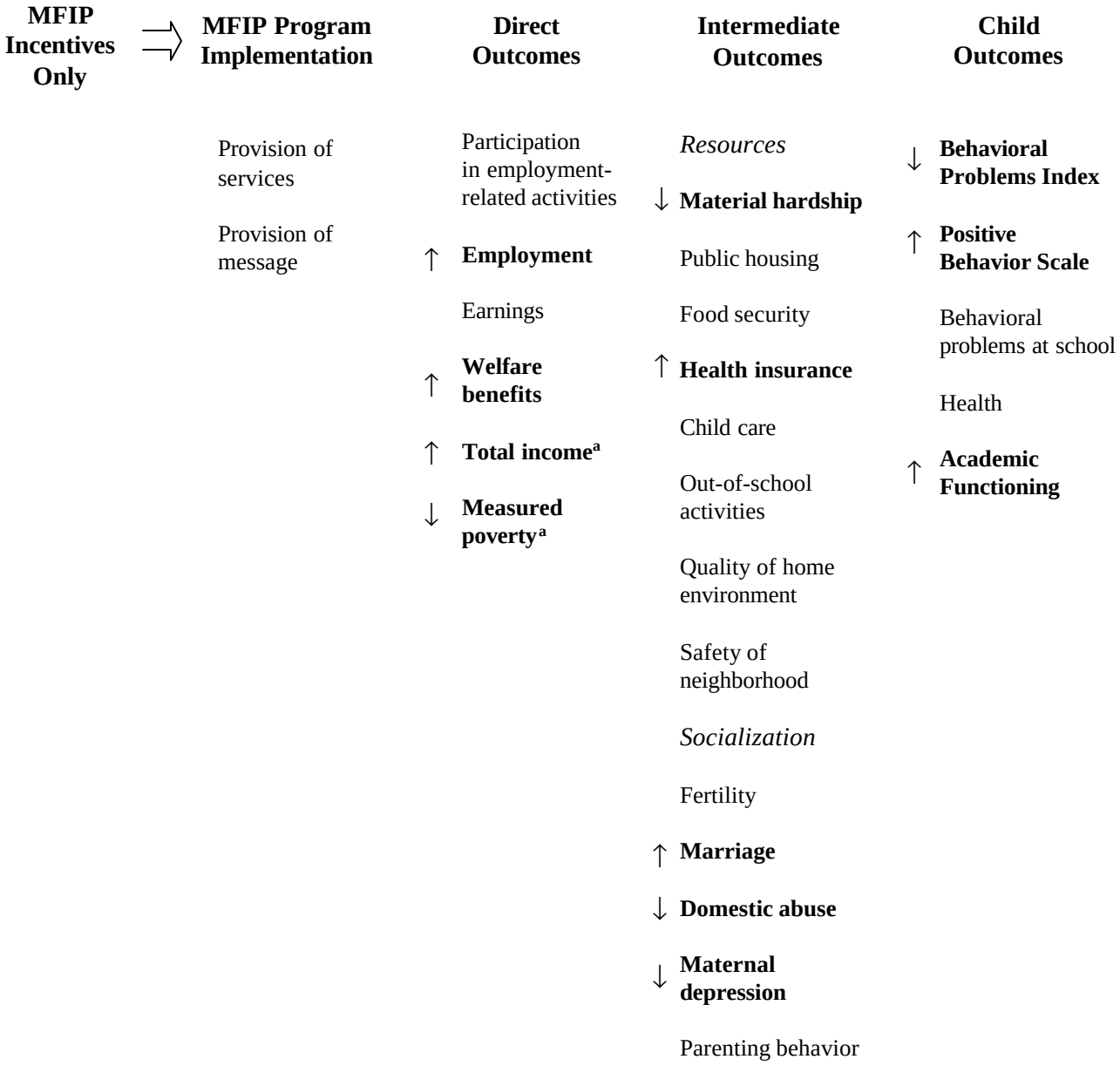
- **MFIP's financial incentives reduced children's problem behavior, increased their positive behavior, and improved their academic functioning.**

Relative to mothers in the AFDC group, mothers in the Incentives Only group reported that their children scored lower on the total Behavioral Problems Index (BPI), as well as on its internalizing and externalizing subscales; scored higher on the Positive Behavior Scale (PBS), as well as on its compliance subscale; and scored higher on school engagement and school performance.

- **MFIP's financial incentives somewhat increased long-term recipients' employment and, via increased welfare benefits, increased their income.**

Figure 4.1

Summary of the Significant Effects of MFIP Incentives Only on Child Outcomes for Long-Term Recipients in Urban Counties



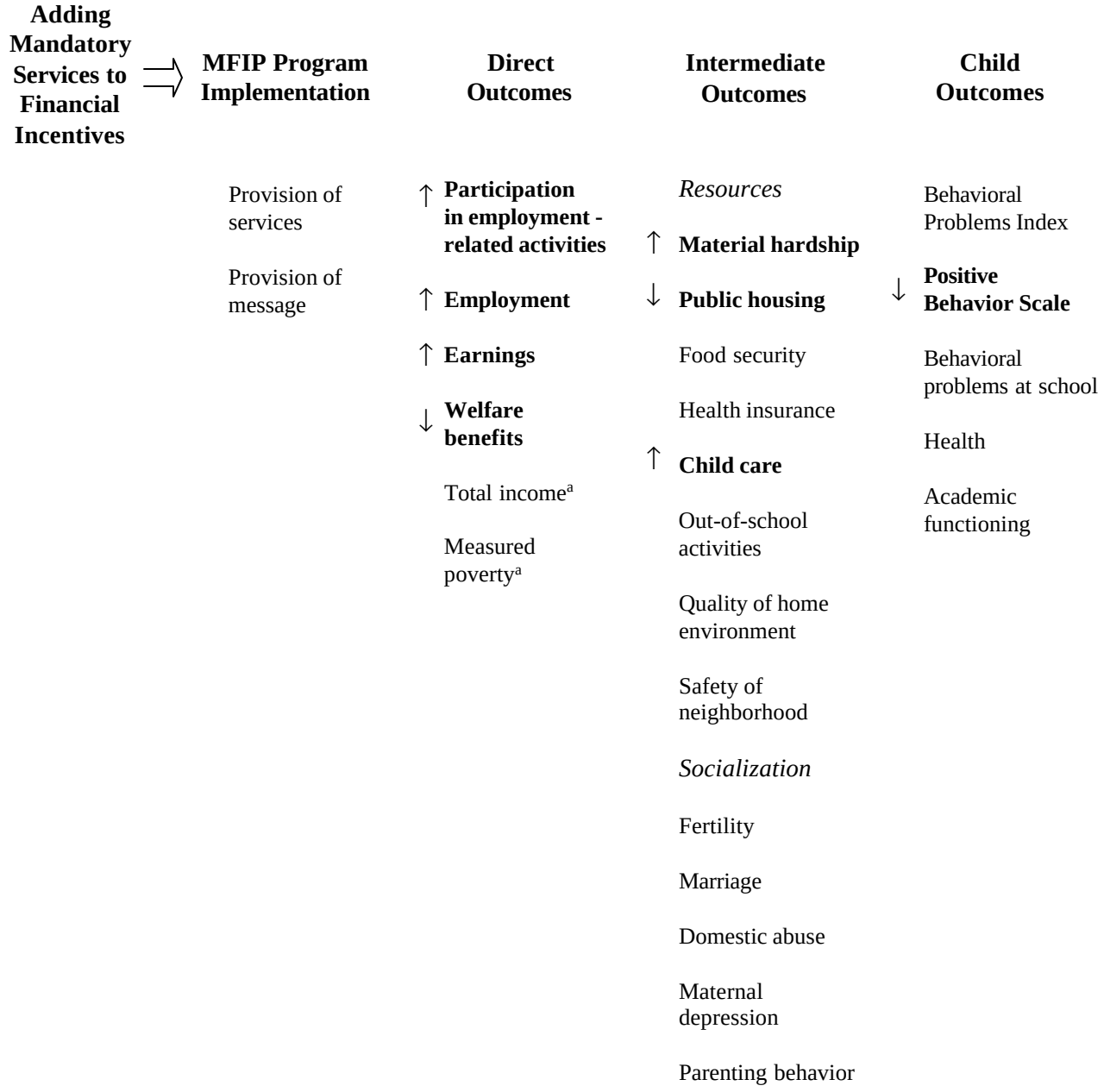
NOTES: Any significant differences, at least at the .10 level, between the program group and the control group (the impact) is indicated in bold. The arrows next to bold items indicate the direction of the impacts.

Outcomes in each column may also interact with or influence each other. The intermediate outcomes are classified in this way for simplicity. In some instances an intermediate outcome, such as marriage, may affect children via both pathways.

[a]Calculated based on the sum of income from benefits and earnings.

Figure 4.2

Summary of the Significant Effects of Adding Mandatory Services to Financial Incentives on Child Outcomes for Long-Term Recipients in Urban Counties



NOTES: Any significant differences, at least at the .10 level, between the program group and the control group (the impact) is indicated in bold. The arrows next to bold items indicate the direction of the impacts.

Outcomes in each column may also interact with or influence each other. The intermediate outcomes are classified in this way for simplicity. In some instances an intermediate outcome, such as marriage, may affect children via both pathways.

[a]Calculated based on the sum of income from benefits and earnings.

MFIP's financial incentives increased parents' employment, particularly part-time employment and employment that was consistent, but did not significantly increase earnings. Some of the increase in part-time employment was due to a reduction in hours worked among recipients who would have worked full time in the absence of MFIP, and some of the increase in part-time employment was due to new entry into employment. Higher welfare benefits for families who worked led to increased annual income from benefits and earnings and to a reduction in measured poverty.

- **MFIP's financial incentives decreased material hardship, and children were more likely to be covered continuously by health insurance.**

Long-term recipients in the Incentives Only group reported less material hardship as measured by an index capturing the ability to pay bills, being evicted, and being able to pay for a doctor's visit. Children in the Incentives Only group were significantly more likely than children in the AFDC group to have had continuous health insurance coverage (primarily under Medicaid) during the follow-up period. Children in the Incentives Only group fared similarly to children in the AFDC group on maternal ratings of their general health, but *any* child in the Incentives Only "mothers' rating" group was more likely to have visited an emergency room or clinic due to an accident, injury, or poisoning.

- **MFIP's financial incentives increased marriage and reduced domestic abuse.**

Compared with the AFDC group, long-term recipients in the Incentives Only group were more likely to report being married at the time of the survey and were significantly more likely to report being married to the biological father of the focal child. MFIP's financial incentives significantly reduced reported incidences of domestic abuse measured to include both physical and nonphysical abuse, such as being threatened, by intimate partners and others.

- **MFIP's financial incentives reduced maternal depression.**

Long-term recipients in the Incentives Only group were less likely to be depressed, according to the total Center for Epidemiological Studies-Depression (CES-D) scale, and were less likely to be at high risk of clinical depression. The full MFIP program did not produce similar impacts on depression for long-term recipients.

The Impact of Adding Mandatory Services to the Financial Incentives. The relative impact of adding mandatory employment-related services to MFIP's financial incentives is obtained by comparing the effects of full MFIP with the effects of MFIP's financial incentives alone (that is, by comparing outcomes for the full MFIP and the MFIP Incentives Only groups). Because no families received a treatment that consisted of mandatory services alone, the impact of adding the services to the incentives can be interpreted only as the added effect of coupling the services to a generous financial incentive and not as the effect of mandating services alone.

The effects of adding mandatory services to existing financial incentives could arguably be either larger or smaller than the effects of providing mandatory services in the absence of financial incentives. On the one hand, there may be positive interactions between financial incentives and mandatory services, increasing the positive effects of mandatory services on employment. For example, the MFIP

message that "work pays" was strongly reinforced during the orientation to employment, possibly increasing participants' likelihood of responding to services by going to work. On the other hand, the effects of adding mandatory services to incentives could be smaller than the effects of mandatory services alone. Imagine that welfare recipients fall into two groups: Group A will go to work in response to any new encouragement — *either* a voluntary work incentive or a mandate to participate in employment-related activities; Group B, a subset of Group A, will respond only if their participation is mandated. In this scenario, comparing outcomes for a group subject to mandatory services plus incentives with outcomes for a group receiving incentives alone captures only the new employment of Group B. That comparison would show a smaller net increase in employment than would be brought about either by incentives alone or by mandates alone, because either of those interventions would lead all of Group A to enter employment.

In what follows, the impact of adding the mandatory services to the financial incentives is defined as relative to the impact of using incentives alone.

- **Adding mandatory services to the financial incentives for long-term recipients, relative to using the incentives alone, decreased selective aspects of their children's positive behavior but had a neutral effect on most other measures of child outcomes.**

Adding mandatory services to the financial incentives significantly decreased the overall measure of children's positive behavior (the total score on the PBS) and decreased two subscales of positive behavior (social competence and autonomy). It is noteworthy that adding mandatory services to financial incentives — which increased full-time employment but did not affect income — did not lead to more systematic negative effects on other child outcomes.

- **The impact of adding mandatory services to the financial incentives increased parents' full-time employment and decreased their welfare income.**

Adding mandatory services to the incentives contributed to about half of the full program's increase in employment; it accounted for all of the program's increase in full-time employment (30 hours or more per week) and nearly all of its increase in average annual earnings. The earnings gain from adding the mandated services to the financial incentives contributed to a reduction in recipients' income from welfare.

- **Adding mandatory services to the financial incentives increased material hardship, the use of child care, and the number of residential moves.**

Adding mandatory services to the financial incentives significantly reduced recipients' reports of being able to meet their basic needs, yet it also increased the number of families who lived in rented or leased housing and reduced the number of families who lived in public or subsidized housing. Adding the mandatory services also increased the use of formal and informal child care, especially the use of consistent formal care.

Conclusions About Adding Mandatory Services. In summary, MFIP's financial incentives accounted for nearly all of the program's effects on marriage, domestic abuse, and mothers' depression

and for all of its beneficial effects on children's behavior and academic functioning. Adding mandatory services to the financial incentives contributed to nearly all the impacts on earnings and the use of formal child care. Furthermore, for some outcomes, the effects of MFIP's financial incentives and its participation mandate counteracted each other. Although the financial incentives reduced material hardship, adding the mandatory services increased material hardship; therefore, the full program had no net effect on material hardship. In addition, although MFIP's financial incentives increased children's positive behavior, adding the mandatory services reduced children's scores on the PBS.

B. Impacts on Employment, Earnings, Income, and Resources

Chapter 3 reported that MFIP was implemented successfully; that is, MFIP families were informed and knew about the financial incentives, the participation mandate, and other services. Compared with recipients in AFDC, MFIP recipients were significantly more likely to have participated in employment-related activities during the three-year period, they were more likely to have worked, and on average they had higher earnings and income from benefits and earnings. The next sections discuss the separate effects on each of these outcomes of MFIP's financial incentives and of adding mandatory services to the incentives.

Participation in Employment-Related Services. Table 4.1 shows that adding the mandatory services to the incentives, as expected, contributed the most to MFIP's increase in participation in employment-related activities. The effect of adding the mandatory services was to increase participation in employment-related activities by 14.8 percentage points, or by 19 percent. Recall that recipients in the Incentives Only group were not subject to the participation mandate; however, they could voluntarily participate in STRIDE. Unsurprisingly, MFIP's financial incentives had no significant effect on participation in employment-related activities. MFIP staff effectively conveyed information about the availability of transitional benefits to recipients in both the MFIP and the Incentives Only groups (not shown). Recipients in the Incentives Only group were significantly more likely than AFDC recipients to understand that they could receive child care and health benefits if they left welfare for work.

Impacts on Employment, Earnings, and Characteristics of Employment. Unlike the expected effects of the full MFIP program on employment and hours worked, the expected effect of MFIP's financial incentives on hours worked is unclear. That is, financial incentives may increase employment among welfare recipients who would not work in the absence of MFIP but may have opposing effects on the number of hours they work. Because welfare recipients may keep more welfare income as their earnings increase, MFIP's financial incentives may increase the number of hours they work. On the other hand, because they may have the same level of total income for fewer hours worked, they may reduce the hours worked, particularly if they would have worked full time in the absence of MFIP. Finally, because MFIP's financial incentives are designed to allow recipients to combine welfare and work, receipt of welfare may increase among those who are working. (See Miller et al., 2000, for a more detailed discussion and the empirical literature on this topic.)

Table 4.1 presents MFIP's impacts on employment and the characteristics of this employment. MFIP's financial incentives alone significantly increased recipients' quarterly employment rate over the 36-month follow-up period, by 8.5 percentage points — a 15 percent increase over the control group. Note that this increase in employment is completely voluntary. The

Table 4.1

MFIP's Impacts on Participation, Employment, Hours Worked, Wages, Number of Jobs Held, and Employment Stability for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	MFIP Incentives Only	AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Participation and employment since random assignment (%)						
Ever participated in an employment-related activity (from survey)	91.4	76.7	71.6	19.8 ***	5.0	14.8 ***
Average quarterly employment rate (from administrative records)	72.8	66.2	57.7	15.1 ***	8.5 ***	6.6 **
Worked since random assignment (survey)	88.3	86.1	74.9	13.4 ***	11.2 ***	2.2
Hours worked in current or most recent job (%)						
Did not work	11.7	13.9	25.1	-13.4 ***	-11.2 ***	-2.2
Worked part time	25.4	32.2	17.5	7.9 **	14.7 ***	-6.8 *
1-19 hours	8.0	12.6	8.9	-0.9	3.7	-4.6 *
20-29 hours	17.0	19.3	8.7	8.3 ***	10.6 ***	-2.3
Worked full time	62.6	53.9	57.4	5.2	-3.5	8.7 **
30-34 hours	14.2	10.1	8.3	6.0 **	1.8	4.1
35-44 hours	40.8	33.1	39.7	1.1	-6.6	7.7 *
45 hours or more	7.6	10.7	9.5	-1.9	1.3	-3.1
Average weekly hours worked among those employed	*33.3*	*31.7*	*34.8*	*-1.5*	*-3.1*	*1.6*
Hourly wage in current or most recent job (%)						
Did not work	11.7	13.9	25.1	-13.4 ***	-11.2 ***	-2.2
Less than $5	5.4	6.5	7.3	-1.9	-0.8	-1.0
$5 to $6.99	20.8	27.7	14.7	6.1 *	13.0 ***	-6.9 **
$7 to $8.99	33.3	27.2	25.6	7.7 **	1.6	6.1
$9 or above	27.7	23.5	26.2	1.5	-2.8	4.3
Average hourly wage among those employed ($)	*8.26*	*7.75*	*8.48*	*-0.22*	*-0.73*	*0.51*

(continued)

Table 4.1 (continued)

Outcome	Average Outcome Levels: MFIP	MFIP Incentives Only	AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Number of jobs held since random assignment						
1	27.4	32.8	26.9	0.5	5.9	-5.4
2 or 3	34.8	34.2	29.1	5.7	5.1	0.6
4 or more	15.4	9.1	10.8	4.6 *	-1.7	6.2 **
Employment stability						
Respondent worked since random assignment and reported all job dates	76.5	75.0	66.1	10.5 ***	9.0 **	1.5
First employment spell began within 12 months of random assignment	54.4	46.8	38.8	15.6 ***	8.0 **	7.6 *
First spell lasted less than 12 months	18.2	14.1	13.9	4.2	0.2	4.1
Employed after first spell	16.2	11.1	9.3	6.8 **	1.8	5.1 *
Not employed after first spell	2.0	3.0	4.6	-2.6 *	-1.6	-1.0
First spell lasted more than 12 months	36.2	32.7	24.8	11.4 ***	7.9 **	3.6
First employment spell began 12 or more months after random assignment	22.1	28.3	27.3	-5.2	1.0	-6.1 *
Sample size (total = 879)	306	292	281			

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample sizes may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

Outcomes shown in italics are nonexperimental.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

right-hand column of Table 4.1 shows the impact of adding mandatory services to the incentives. The added services contributed to just less than half the increase in average quarterly employment due to the full MFIP program. The impact of adding mandatory services is 6.6 percentage points, compared with 8.5 percentage points attributed to financial incentives alone. In addition, the effects of adding the mandatory services persisted only during the first two years after random assignment (not shown).

Table 4.1 further presents MFIP's impacts on the characteristics of the current or most recent job. Compared with the control group, note that MFIP's financial incentives increased the number of recipients who worked part time for 20 to 29 hours per week, increased the number of recipients who worked at jobs that paid $5 to $7 per hour, and increased stable employment. Some of the increase in part-time employment was due to a reduction in hours worked among recipients who would have worked full time otherwise. Of those long-term recipients who worked, 77 percent in the control group worked more than 30 hours per week, compared with 63 percent in the Incentives Only group (calculating by dividing the percentage working full time by the percentage who worked since random assignment). Long-term recipients in the Incentives Only group were also significantly more likely to report that their current or most recent job did not offer paid vacation, paid sick days, or health insurance (not shown).

Table 4.1 also shows that adding the mandatory services to the financial incentives, relative to using the incentives alone, reduced the number of recipients who worked less than 20 hours per week, by 4.6 percentage points, or by 36 percent. Adding the mandatory services increased the number of recipients who held four or more jobs during the follow-up period, by 6.2 percentage points, or by 68 percent. These patterns indicate that responses to MFIP's financial incentives were to enter part-time employment or reduce hours worked, and responses to fulfill the requirements of the participation mandate were to increase hours worked and the number of jobs held.

This increase in the number of jobs held is also consistent with the effects on employment stability. As shown in Chapter 3 (and in column 4 of Table 4.1), MFIP increased stable employment, or the number of recipients who went to work during the first year and stayed continuously employed for at least 12 months. A comparison of the two columns at the right shows that MFIP's effects on stable employment were due largely to its financial incentives. The majority of recipients who went to work during the first year in response to MFIP's incentives (8 percentage points) stayed employed continuously (7.9 percentage points). In contrast, adding the participation mandate drew additional recipients to work (many involuntarily), but some of them may not have been able to stay in jobs long. Nonetheless, the majority of those who went to work in response to the added services, and who subsequently lost their jobs, got other jobs sometime later (shown by the impact of 5.1 percentage points). This increase in reemployment is consistent with the fact that the effect of adding the mandatory services to the incentives was to increase the number of jobs held.

Impacts on Earnings, Welfare Benefits, and Income. Table 4.2 presents MFIP's impacts on earnings, welfare benefits, and income. MFIP's financial incentives alone did not significantly change average annual earnings. Although the impact of the incentives on average annual earnings was positive ($606) and significant during the first year after random assignment, it was negative each of the following two years (not shown). Nearly all the gain in earnings from

Table 4.2

MFIP's Impacts on Earnings, Welfare, Income, and Poverty for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Earnings and welfare since random assignment						
Average annual earnings ($)	4,657	3,967	3,906	751 *	60	691 *
Average quarterly receipt rate (%)	91.0	90.6	86.5	4.5 **	4.1 **	0.4
Average annual welfare benefit ($)	7,014	7,535	6,458	556 **	1,078 ***	-522 **
Income and poverty since random assignment						
Average annual income from welfare and earnings ($)	11,671	11,502	10,364	1,307 ***	1,138 ***	169
Measured poverty[a] (%)	68.5	73.3	81.3	-12.8 ***	-8.0 **	-4.7
Income and poverty since random assignment with estimated EIC[b]						
Average annual income from welfare and earnings with estimated EIC ($)	12,734	12,509	11,128	1,606 ***	1,381 ***	225
Measured poverty with EIC[a] (%)	57.7	63.4	74.5	-16.8 ***	-11.1 ***	-5.7
Income sources						
Proportion of income from earnings[c] (%)	33.9	30.2	30.1	3.8	0.0	3.8
In last quarter of follow-up (%)						
Earnings, welfare	38.2	36.5	22.6	15.7 ***	14.0 ***	1.7
Earnings, no welfare	18.4	19.5	25.9	-7.5 **	-6.4 *	-1.1
No earnings, welfare	33.7	37.2	42.8	-9.2 **	-5.6	-3.6
No earnings, no welfare	9.7	6.8	8.7	1.0	-1.9	3.0
Sample size (total = 879)	306	292	281			

(continued)

Table 4.2 (continued)

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and welfare benefit records.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

[a]Measured poverty is defined as the percentage of families whose earnings plus welfare benefits are below the official poverty threshold. The appropriate threshold is determined by the number of children in the family. Because the measure of income used here includes earnings, cash welfare, and Food Stamp benefits but does not include income from other sources, the measured poverty rate presented here is not comparable with the official poverty rate.

[b]These estimates are calculated assuming that all eligible individuals receive both the federal and the state Earned Income Credit. Estimated payroll taxes and federal and state income taxes are also subtracted.

[c]Proportion of income is an average over three years. It is slightly different than average earnings divided by average income.

MFIP can be attributed to adding the mandatory services to incentives, which increased average annual earnings by $691 over the effects of using the incentives alone ($60). The full program, then, increased average annual earnings by $751.

Compared with AFDC, MFIP's financial incentives increased average annual welfare payments to long-term recipients by about $1,000 over the 36-month follow-up period. As a result, MFIP's incentives also increased average annual income from earnings and welfare by $1,138, and it decreased measured poverty by 8 percentage points. Adding the mandate to the incentives significantly decreased welfare receipt by about $500 over the 36-month follow-up period. Because adding the mandatory services increased earnings and this increase matched the decrease in welfare, adding the mandatory services had no effect on income or measured poverty, relative to the effects of the incentives alone. An important difference, however, is that the MFIP group's income increase came from higher earnings and higher welfare benefits, while the Incentives Only group's income increase came entirely from higher welfare benefits. The impacts on income after adjusting for the federal and state Earned Income Credits (EIC) and taxes are of a higher magnitude than the impacts on income without these adjustments, but they show a similar pattern of effects across the research groups.

The bottom panel of Table 4.2 presents impacts on income sources. In the last quarter of follow-up, the Incentives Only group was more likely than the AFDC group to rely on both earnings and welfare, which is not surprising, given that the financial incentives were designed to let more working families remain eligible for benefits. However, despite the fact that the incentives alone increased welfare receipt, they did not increase the number of families who relied solely on welfare — one measure of dependence. Adding the mandatory services to the incentives did not have substantial effects on recipients' income sources, relative to using the incentives alone, with the exception that fewer recipients relied solely on welfare (although this impact of 3.6 percentage points is not statistically significant).

Impacts on Resources. Table 4.3 presents impacts on material hardship, food security, and health insurance. Recipients in the Incentives Only group reported lower levels of material hardship than their AFDC counterparts but no significant differences in measures of food security. Children in the Incentives Only families were more likely to have been continuously covered by health insurance (11.7 percentage points) and more likely to be covered by Medicaid or MinnCare in the month before the survey (9 percentage points).

With MFIP's focus on mixing welfare and work, its financial incentives allowed recipients to continue receiving public assistance longer than they would have otherwise. One benefit of encouraging a mix of welfare and work is increased information about, access to, and use of public health benefits and food benefits. Consistent with this hypothesis, adding the mandatory services did not significantly affect health insurance coverage.

However, adding the mandatory services to the incentives did increase material hardship. Recall that while adding the services significantly increased annual earnings, it did not increase income relative to the financial incentives alone. Adding the mandatory services also significantly decreased the number of recipients living in public or subsidized housing, by 7.2 percentage points, and significantly increased the number who lived in other types of housing (leased or rented housing), by 8.8 percentage points. This suggests that adding the services to the incentives

Table 4.3

MFIP's Impacts on Material Hardship, Food Security, and Health Insurance for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Material hardship						
Perceptions of financial strain	2.8	2.8	2.9	-0.1	-0.1	0.0
Index of material hardship	1.6	1.4	1.6	0.0	-0.2 *	0.2 *
Own home (%)	12.8	14.3	15.3	-2.6	-1.0	-1.6
Live in public or subsidized housing (%)	17.2	24.4	19.4	-2.2	5.0	-7.2 **
Live in other housing (%)	70.1	61.3	65.2	4.9	-3.9	8.8 **
Food security						
In last month, family had enough to eat (%)	79.8	84.9	80.1	-0.3	4.8	-5.1
In the last month, did any children skip a meal because not enough money for food? (%)	5.9	4.9	3.9	2.0	1.1	0.9
Health insurance						
Children continuously covered by health insurance during past 36 months (%)	75.5	78.7	67.0	8.5 **	11.7 ***	-3.2
In the last month, were children covered by Medicaid or MinnCare? (%)	73.9	76.6	67.6	6.3 *	9.0 **	-2.7
In the last month, were children covered by private insurance? (%)	20.9	19.2	23.9	-3.0	-4.8	1.8
Sample size (total = 879)	306	292	281			

(continued)

Table 4.3 (continued)

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample sizes may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

encouraged recipients to move from public or subsidized housing into leased or rented housing, possibly because they were more aware of housing opportunities or because they moved closer to their jobs, or that AFDC recipients were more likely to move from rented or leased housing to public or subsidized housing.

C. Impacts on Child's and Family's Environment, Parent-Child Relationships, and Family Functioning

As shown in Chapter 3, MFIP not only significantly affected such direct outcomes as recipients' employment, earnings, and income but also significantly affected a number of intermediate outcomes relating to family and child well-being. MFIP increased mothers' use of formal child care, increased marriage, and decreased rates of domestic abuse. The following sections discuss the separate effects of MFIP's two components — financial incentives and mandatory employment-related services — on these intermediate outcomes.

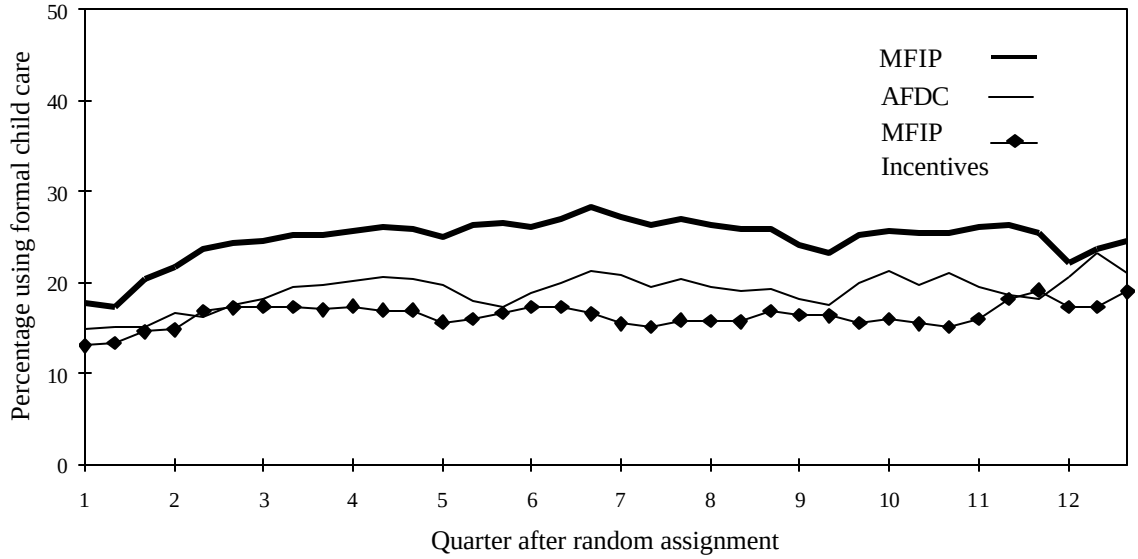
Child's and Family's Environment. Table 4.4 presents MFIP's impacts on child care and out-of-school activities. Most striking is that the table clearly shows that MFIP's mandate to participate in employment-related services contributed to all of the increased use of child care. The impacts from this table also suggest that the child care assistance component of MFIP's financial incentives — reimbursing families for child care expenses before rather than after — had little effect on child care. Adding the mandatory services to the incentives significantly increased the use of formal and informal care and significantly decreased the use of self-care. (See Box 4.1 for a discussion of child care quality in the week prior to the interview.)

Table 4.5 shows that adding mandatory services to financial incentives also fully contributed to the increase in the duration of formal child care. Adding the mandatory services increased the amount of time the focal child spent in one child care arrangement by three months, a 26 percent increase over using the incentives alone. The bottom rows of the table present impacts on child care stability. Chapter 3 showed that MFIP increased the use of stable formal care. Because MFIP's incentives alone had little effect on child care use in general, they did not affect the timing or stability of care. All these effects resulted from adding of the mandatory services. Thus, though adding mandatory services did not increase stable employment, it did increase stable child care.

MFIP's results on child care use are consistent with its impacts on employment and hours worked. The increases in maternal employment resulting from MFIP's financial incentives were voluntary and primarily part time. These mothers of primarily school-age children may have chosen to work part time so that they could take care of their children during off-school hours. Figures 4.3 and 4.4 present some evidence in support of this hypothesis. Compared with both the MFIP and the AFDC groups, long-term recipients in the Incentives Only group were least likely to use formal care and were less likely to use informal care throughout the follow-up period. The impacts on informal care for the Incentives Only group compared with AFDC families were significant for 10 of the 36 months. Though the incidence of self-care was nearly zero in AFDC families, it is interesting that MFIP's financial incentives also slightly increased self-care throughout the 36-month follow-up period (not shown).

Figure 4.3

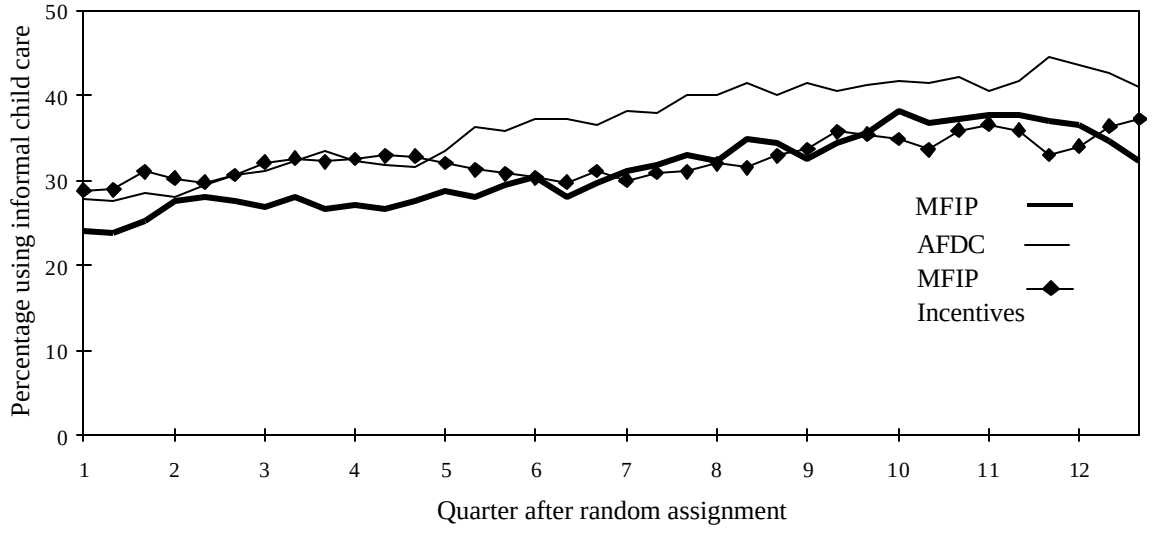
Quarterly Participation in Formal Child Care for Focal Children of Long-Term Recipients in Urban Counties



SOURCE: MDRC calculations using data from the 36-month client survey.

Figure 4.4

Quarterly Participation in Informal Child Care for Focal Children of Long-Term Recipients in Urban Counties



SOURCE: MDRC calculations using data from the 36-month client survey.

Table 4.4

MFIP's Impacts on Child Care and Out-of-School Activities for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Child care used since random assignment						
Never used child care (%)	12.1	20.3	22.0	-9.9 ***	-1.7	-8.2 ***
Formal child care (%)	52.8	41.8	42.3	10.6 ***	-0.5	11.0 ***
Informal child care (%)	75.2	67.8	67.7	7.5 *	0.2	7.4 *
Self-care (%)	13.7	18.2	16.2	-2.5	2.0	-4.4 *
Out-of-school activities since random assignment						
Attended extended day program (%)	19.0	15.9	17.3	1.7	-1.4	3.2
Participated in lessons, clubs, or activities (%)	4.1	6.8	9.3	-5.2 **	-2.5	-2.8
Participated in extracurricular activities (%)	55.6	54.9	53.9	1.7	0.9	0.7
Child care in week prior to interview						
Primary care in last week was formal care (%)	17.8	15.8	16.0	1.8	-0.2	2.0
Primary care in last week was informal care (%)	26.5	29.6	33.6	-7.1 *	-3.9	-3.1
Total hours in care last week	9.4	9.7	10.0	-0.6	-0.3	-0.3
Total hours in self-care last week	1.8	1.4	0.8	1.0	0.6	0.4
For primary child care arrangement[a]						
Perception of high quality overall (%)	33.0	38.2	37.0	-3.9	1.2	-5.2
Perception of high-quality warmth (%)	33.5	35.2	36.1	-2.7	-0.9	-1.8
Perception of high-quality safety(%)	37.2	39.4	40.7	-3.5	-1.3	-2.2
Sample size (total = 879)	306	289	281			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

[a]These measures were constructed using outcomes measured in the week prior to the interview from the Emlen scale; see Boxes 3.1 and 4.1 for details.

Table 4.5

MFIP's Impacts on the Extent and Stability of Child Care for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Extent of child care since random assignment						
Total months in formal care	8.9	5.9	6.9	2.1 **	-1.0	3.0 ***
Total months in informal care	11.2	11.7	13.2	-2.0	-1.5	-0.5
Total months with one arrangement	15.2	12.1	13.3	1.9	-1.2	3.1 ***
Stability of child care since random assignment						
Not missing child care calendar information (%)	88.1	82.0	83.2	4.9	-1.2	6.1 **
Any child care (%)	78.2	73.2	71.9	6.3 *	1.4	4.9
Any formal child care (%)	46.4	34.1	36.6	9.8 **	-2.5	12.3 ***
First formal care spell started within 12 months (%)	33.5	21.9	25.8	7.8 **	-3.9	11.7 ***
Spell lasted less than 12 months (%)	12.7	8.2	13.0	-0.3	-4.8	4.5
Spell lasted more than 12 months (%)	20.9	13.7	12.8	8.1 **	0.9	7.1 **
First informal care spell started within 12 months (%)	39.3	39.5	41.3	-2.0	-1.8	-0.2
Spell lasted less than 12 months (%)	17.3	14.6	13.4	3.9	1.2	2.6
Spell lasted more than 12 months (%)	22.0	24.8	27.8	-5.8	-3.0	-2.8
Sample size (total = 879)	306	292	281			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

Box 4.1

Child Care Quality

Although adding the mandatory services to the financial incentives had no significant effects on measures of child care quality (shown in Table 4.4), these impacts are experimental estimates and include women who did not use child care in the week prior to the interview. Thus, the experimental impacts may not capture important variations in the patterns of child care quality among women who used child care. Approximately 50 percent of recipients in the AFDC group reported using child care in the week prior to the interview date, and 16 percent reported that their primary child care arrangement was formal care. Differences in the child care quality outcomes among those families who used formal care in the week prior to the interview are presented below. Note that because these quality measures are based on care used in the week prior to the survey, they may not be indicative of the types of child care used throughout the follow-up period.

Child Care Quality	MFIP	MFIP Incentives Only	MFIP vs. MFIP Incentives Only
Average group size	*18.7*	*20.3*	*-1.6*
Child-staff ratio	*7.3*	*6.7*	*0.6*
Total Emlen scale	*3.5*	*3.7*	*-0.2*
Emlen warmth scale	*3.3*	*3.6*	*-0.3*
Emlen safety scale	*3.5*	*3.8*	*-0.3*

Among long-term recipients who used formal child care as their primary arrangement, those in the MFIP group reported smaller average group sizes, higher child-staff ratios, and slightly lower quality, as measured by the Emlen scales, than long-term recipients in the Incentives Only group. In fact, although nonexperimental, the differences in the Emlen quality scales between the MFIP group and the Incentives Only group are statistically significant. This finding gives some indication, albeit weak, that the increased use of formal child care due to the addition of the mandatory services was in arrangements that long-term recipients perceived to be of slightly lower quality.

Table 4.6 presents MFIP's impacts on the home environment, the neighborhood, and residential moves. Neither MFIP's financial incentives nor the addition of the services seem to have affected measures of the home environment or perceptions of neighborhood quality.[39] However, adding the mandatory services significantly increased the number of residential moves since random assignment. As previously discussed, these moves likely represented moves from public or subsidized housing to leased or rented housing. Such moves may have entailed school changes for the children or may have been from "low-quality" neighborhoods to "better" neighborhoods

[39]MFIP's financial incentives alone had no significant impact on measures of the home environment that were constructed to be comparable to studies in the Project on State-Level Child Outcomes.

Table 4.6

MFIP's Impacts on the Home Environment and Neighborhood for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Quality of home environment						
Total HOME scale	75.7	76.2	75.5	0.2	0.7	-0.5
HOME cognitive subscale	25.8	25.9	25.8	0.0	0.1	-0.1
HOME routines subscale	16.4	16.5	16.2	0.2	0.3	-0.1
HOME physical environment subscale	24.6	24.5	24.7	-0.1	-0.2	0.1
Neighborhood						
Live in a safe neighborhood (%)	73.4	76.4	74.0	-0.6	2.5	-3.1
Number of moves since random assignment	1.9	1.5	1.7	0.2	-0.1	0.4 ***
Sample size (total = 879)	306	292	281			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

(although the minimal impact on the measure of neighborhood safety suggests that the moves did not affect this aspect of perceived neighborhood quality).

Parent-Child Relationships and Family Functioning. The top panel of Table 4.7 presents MFIP's impacts on household composition. MFIP's financial incentives contributed to all of its effects on marital status. Compared with the AFDC group, at the 36-month interview date, recipients in the Incentives Only group were 4.1 percentage points more likely to be married and were 2.1 percentage points more likely to be married to the biological father of the focal child. Thus, nearly one-third of the increase in marriages due to the financial incentives were to the biological fathers of at least one of the recipients' children.

MFIP's financial incentives contributed to all the increase in marriage due to MFIP.[40] An experimental approach was first brought to bear on the question of the relationship between welfare and marriage in the negative income tax (NIT) experiments conducted in several sites in the United States and Canada in the 1960s and 1970s. The original marital analysis from the NIT experiments suggested that the program dramatically increased marital dissolution among white and black couples in two sites, Seattle and Denver, relative to a control group (Groeneveld, Tuma, and Hannan, 1977) and decreased rates of marriage/remarriage among Hispanic single-parent families (SRI International, 1983). Surprisingly, the marital dissolution effects were concentrated among the subgroup who received the least generous NIT plan, offering benefits that were approximately equal to those available from AFDC.[41] A reanalysis of these data brought these findings into question (Cain, 1986).

A study in four California counties, including both urban and rural areas, found evidence that a $100 benefit reduction had no effect on marriage for single-parent families (Hu, 1998). A second recent experimental study examined the effects on marriage and fertility of Delaware's A Better Chance (ABC) demonstration; at the 18-month follow-up point, ABC significantly increased marriage among young women and less educated women, groups who also experienced decreases in welfare and increases in earnings (Fein, 1999). Finally, findings from the 36-month follow-up of the Canadian Self-Sufficiency Project show that SSP significantly increased employment and income overall in the two provinces studied, but it increased marriage in one province, New Brunswick, and significantly decreased marriage in the other province, British Columbia (Harknett and Gennetian, 2000).

[40]Upon marriage, a single-parent family in MFIP became a two-parent family, subject to the rules and interventions outlined for two-parent families in the program. In contrast to AFDC-Unemployed Parent (AFDC-UP) policies, one component of the MFIP intervention for most two-parent families was streamlined eligibility to receive public assistance. (See Miller et al., 2000, for a full discussion of the two-parent family intervention and impacts.) Because of this, single-parent AFDC recipients may have had an incentive to underreport marriage, suggesting that the impact of MFIP may reflect underreporting differences; objective measures of marriage, however, from information in family court records, suggest that MFIP's impacts did not arise from underreporting among AFDC recipients.

[41]The NIT experiments sought to avoid marriage disincentives by extending eligibility to both one- and two-parent families. For two-parent families, the NIT offer was extended to both the husband and the wife in the event of a marital dissolution, and thus it subsidized the breakup. Income often increased quickly and sharply when a spouse left the household (Cain, 1986; Cain and Wissoker, 1990).

Table 4.7

MFIP's Impacts on Household Composition, Domestic Abuse, Psychological Functioning, and Parenting Behavior for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Marital status and fertility						
Had a child since random assignment (%)	26.3	22.9	27.0	-0.8	-4.2	3.4
Currently married and living with spouse (%)	11.3	10.3	6.2	5.0 **	4.1 *	0.9
Currently married to biological father (%)	2.7	2.9	0.9	1.8	2.1 *	-0.2
Currently cohabiting (%)	14.6	14.7	18.5	-3.8	-3.8	0.0
Currently cohabiting with biological father (%)	1.5	2.0	2.8	-1.3	-0.9	-0.5
Domestic abuse						
Mother abused by intimate partner last year (%)	21.8	21.9	28.5	-6.7 *	-6.5 *	-0.1
Abused by current partner (%)	19.9	19.8	26.3	-6.4 *	-6.6 *	0.2
Abused by ex-partner (%)	17.2	18.7	25.4	-8.3 **	-6.8 *	-1.5
Abused by partner and ex-partner (%)	13.9	15.2	21.5	-7.6 **	-6.3 *	-1.2
Experienced physical abuse (%)	20.1	19.2	25.2	-5.1	-6.0	0.9
Experienced nonphysical abuse (%)	7.2	10.0	9.7	-2.6	0.3	-2.9
Experienced physical and nonphysical abuse (%)	5.5	7.3	6.5	-1.0	0.8	-1.8
Mother abused by other person last year (%)	24.5	24.7	33.0	-8.4 **	-8.3 **	-0.2
Abused by family member (%)	19.4	21.6	24.6	-5.1	-2.9	-2.2
Abused by unrelated individual (%)	22.2	19.2	28.4	-6.2	-9.2 **	3.0
Abused by family and unrelated individual (%)	15.3	14.0	15.1	0.2	-1.1	1.3
Experienced physical abuse (%)	23.5	24.0	30.7	-7.2 *	-6.7	-0.5
Experienced nonphysical abuse (%)	6.1	5.4	7.1	-1.0	-1.7	0.7
Experienced physical and nonphysical abuse (%)	5.0	4.7	4.8	0.2	-0.1	0.4
Mother ever abused in last 3 years (%)	49.1	49.9	59.6	-10.5 **	-9.7 **	-0.8

(continued)

Table 4.7 (continued)

Outcome	Average Outcome Levels: MFIP	MFIP Incentives Only	AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Maternal psychological functioning						
Depression scale	17.5	16.8	19.0	-1.5	-2.1 **	0.6
At high risk of clinical depression (%)	28.8	23.2	31.6	-2.8	-8.4 **	5.6
Parenting behavior						
Aggravation scale	1.8	1.8	1.9	-0.1	-0.1	0.0
Feeling less aggravated (%)	94.4	95.2	93.0	1.5	2.3	-0.8
Warmth scale	3.4	3.5	3.5	0.0	0.1	-0.1 *
Harsh-parenting scale	1.7	1.6	1.7	0.0	-0.1	0.1
Frequency of harsh parenting	2.3	2.2	2.4	-0.1	-0.2 *	0.1
Supervision scale	4.7	4.6	4.5	0.1 **	0.1	0.0
Sample size (total = 879)	306	292	281			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

The results from the MFIP study suggest that the increase in income and changes in the benefit structure encouraged single mothers to marry.[42] In addition, children may have had access to greater financial resources because there likely was an additional earner in the family. A snapshot of total income for the last month available from the survey shows no significant differences in family income between the Incentives Only group and the AFDC group. (See Miller et al., 2000, for further discussion.)

The second panel in Table 4.7 presents MFIP's impacts on domestic abuse. While Table 3.7 shows that MFIP significantly reduced the incidence of domestic abuse, Table 4.7 shows that MFIP's financial incentives accounted for nearly all of this effect. Recipients in the Incentives Only group were nearly 10 percentage points, or 16 percent, less likely to have experienced domestic abuse in the past three years, compared with recipients in the AFDC group. MFIP's financial incentives also significantly reduced mothers' reports of domestic abuse by intimate partners (by 23 percent) and others (by 25 percent) in the year prior to the interview. The effects of MFIP's financial incentives on domestic abuse are striking. It is difficult to pinpoint precisely how the changed welfare rules affected abuse. Several aspects of MFIP likely helped women feel a greater sense of control over their lives and their finances, perhaps changing the dynamic between them and their abusers. These aspects include explicitly linking the increased income and work, which increased the reward for work and made the additional income feel "earned"; providing Food Stamps in the form of cash, which gave parents more control over their spending patterns; and encouraging parents to take advantage of MFIP's opportunities to rely less on the welfare system. It is also interesting that, for these long-term recipients, domestic abuse has a lower correlation with marriage (correlation = 0.1) than with maternal depression (correlation = 0.3), further suggesting that MFIP may have reduced abuse in part by increasing mothers' feelings of control over their circumstances.

A lower incidence of domestic abuse may affect children in many ways (see Rapheal and Tolman, 1997, for a complete discussion). To the extent that domestic abuse is linked to maternal depression and self-esteem, children may benefit from improved parenting. Compared with welfare recipients who were never abused, single mothers on welfare who have been abused are more likely to suffer from depression, mental health problems, post-traumatic stress disorder, and alcohol abuse. Children themselves may experience less abuse if their mothers are experiencing less of it, and they may also benefit from witnessing less domestic abuse. Abused women are more than twice as likely to have been exposed to domestic violence as children, both as victims and as witnesses; similarly, abused children and children who witness abuse of their mothers are more likely to be abusive as adults.

The bottom two panels of Table 4.7 present MFIP's impacts on depression and parenting behavior. MFIP's financial incentives significantly reduced recipients' depressive symptoms (based on a scale with a possible range from 0 to 60), compared with recipients in AFDC. Recipients in the Incentives Only group were also 8.4 percentage points less likely to be at risk of clinical depression, that is, scoring at 24 or above on the scale — a 27 percent decrease from the AFDC group. Except for significantly decreasing the frequency of harsh parenting, MFIP's financial incentives had little effect on parenting.

[42]MFIP also increased the likelihood among two-parent families of staying married or formalizing a partnership. See Chapter 6 of Volume 1 for this discussion (Miller et al., 2000).

It is somewhat surprising that the effects of financial incentives on depression do not show a stronger link with parenting.[43] The hypotheses linking maternal depression and parenting behavior are based on empirical research examining the effects of losses in income. Perhaps gains in income from employment and gains in income from other sources have very different implications for the relation between maternal depression and parenting. Or perhaps there may be observed or unobserved aspects of parenting that are most affected by depression but are not adequately measured in the survey. (For example, depressed mothers have been found to engage their children less actively and less positively than mothers who are not depressed, and these levels of observational measures of parenting were not assessed in this study.)

D. Impacts on Child Outcomes

Section V of Chapter 3 reports on MFIP's child outcomes; the program significantly decreased maternal reports of children's problem behavior and significantly increased maternal reports of their school engagement and performance. The following discussion examines the separate effects of MFIP's financial incentives and of adding the mandatory employment-related services.

Table 4.8 presents MFIP's impacts on child outcomes. A comparison of the impacts of MFIP's financial incentives and of adding the mandatory services shows that the improvements in children's behavior result entirely from the financial incentives. For example, MFIP's incentives reduced the Behavioral Problems Index (BPI) — a summary score that can range from 0 to 56 — by 1.5 points, and adding the mandatory services produced no additional effects. Furthermore, MFIP's incentives decreased children's internalizing behavior, such as feelings of anxiety, and increased children's positive behavior, or positive peer interaction.[44] The average score for children in the MFIP Incentives Only group is 200.6, out of a possible range of 0 to 250, for a significant impact of 6.9 points. MFIP's incentives also significantly improved children's compliance, as measured by a subscale of the Positive behavior Scale (PBS), by 3.9 points.[45] The impact of adding the mandatory services, in contrast, was to decrease the total PBS as well as the social competence and autonomy subscales.

Even though adding the mandatory services decreased children's positive behavior, this effect was counteracted by a positive effect of the financial incentives. Thus, children in MFIP families still scored higher on these positive behavior measures than children in AFDC families, although these differences are not statistically significant. As noted earlier, the BPI and PBS measure different aspects of behavior, so it is possible for MFIP's components to have different

[43]MFIP's financial incentives had no impact on a number of alternative measures of parenting that combined warmth, supervision, and aggravation, and they had no impact on various measures of dispersion, that is, respondents who scored above the 75th percentile or below the 25th percentile on these parenting scales (determined by distributions for the control group).

[44]MFIP's financial incentives significantly reduced children's externalizing behavior but did not significantly affect internalizing behavior, in both cases as constructed to be comparable with the studies in the Project on State-Level Child Outcomes.

[45]MFIP's financial incentives also significantly improved a PBS compliance subscale constructed to be comparable with the studies in the Project on State-Level Child Outcomes.

Table 4.8

MFIP's Impacts on Maternal Reports of Child Behavior for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Behavioral Problems Index						
Total score	11.2	11.2	12.7	-1.5 *	-1.5 *	0.1
Externalizing subscore	5.1	5.2	6.0	-0.9 **	-0.8 *	-0.1
Internalizing subscore	4.1	4.0	4.5	-0.3	-0.5 *	0.2
High level of behavioral and emotional problems (%)	6.8	10.6	14.5	-7.7 ***	-3.9	-3.8
Positive Behavior Scale						
Total score	194.2	200.6	193.7	0.5	6.9 **	-6.4 *
Compliance subscore	81.3	83.6	79.7	1.6	3.9 **	-2.4
Social competence subscore	58.2	60.1	59.0	-0.7	1.1	-1.9 **
Autonomy subscore	32.0	33.4	32.7	-0.7	0.7	-1.4 **
Behavioral problems at school						
Contacted by school about child's behavioral problems? (%)	29.8	34.3	34.6	-4.7	-0.2	-4.5
In special education? (%)	18.0	21.1	22.5	-4.5	-1.4	-3.1
Sample size (total = 879)	306	292	281			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

effects on each outcome. In addition, MFIP's two components produced different effects within the same scale — the financial incentives particularly improved the compliance subscale of the PBS, while adding the mandatory services significantly reduced the social competence and autonomy subscales.

Table 4.9 presents MFIP's impacts on children's health and academic functioning. A comparison of the impacts of the financial incentives with the impacts of adding mandatory services shows that MFIP's effects on these outcomes are also largely due to the incentives. Recipients in the Incentives Only group, for example, reported higher levels of school engagement for their children than their AFDC counterparts — 10.2 versus 9.9 (on a score with a range from 0 to 12), for a statistically significant impact of 0.4 point. Recipients in the Incentives Only group were also more likely than AFDC recipients to report that their children had an accident or injury requiring a visit to a clinic or emergency room. This finding further suggests that it is not the increased use of child care that is driving the effect on this outcome, because the Incentives Only group did not experience significant increases in child care use.

In summary, nearly all of MFIP's beneficial effects on child outcomes can be attributed to the financial incentives. These results are consistent with the effects of MFIP's financial incentives on other outcomes, such as family income, marital status, maternal depression, and domestic abuse. In most cases, adding the mandatory services to the incentives produced no additional effect, positive or negative, so that effects of the full program are still positive.

II. Using the MFIP Intervention to Decompose the Effects of Income and the Effects of Employment

This section explores whether the effects of increased income can be isolated from the effects of increased employment generated by MFIP. MFIP significantly increased income and employment, and, according to the conceptual model, these effects may have impacts on children in a variety of ways. Fortunately, because the impacts on income and employment varied across each of MFIP's experimental groups, the three-group research design can be used to highlight the different potential ways in which income and employment affected child outcomes.[46] The implications from the results of this analysis are supported by findings from subgroup analyses and from nonexperimental analyses. This section revisits the tables throughout Chapter 4 to link MFIP's effects on mothers' employment and income to its effects on child outcomes and to make sense of these links via MFIP's effects on children's environments and family functioning.

As state policymakers weigh the costs and benefits of implementing welfare and employment programs, they need to understand and differentiate the potential implications of "employment only" policies and "employment and enhanced income" policies on family and child well-being. It has traditionally been difficult to isolate the pure effects of employment on children from the effects of increased earnings (or income) from that employment. Although a substantial empirical literature using nonexperimental techniques exists to isolate the effects of employment from the effects of income on children's well-being, interpreting the results from this work re-

[46]This is an effort to understand causal relationships even though assumptions cannot be made about these causal relationships.

Table 4.9

MFIP's Impacts on Maternal Reports of Children's Health and Academic Functioning for Long-Term Recipients in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Health and safety						
Child's health rated by mother as very good or excellent (%)	75.0	80.4	77.8	-2.8	2.6	-5.4
Any child have accident/injury that required a visit to an emergency room or clinic? (%)	44.0	47.2	36.9	7.1 *	10.3 **	-3.2
Academic functioning						
Performance in school	4.1	4.1	4.0	0.2 *	0.2 *	0.0
Performance is below average (%)	7.2	8.9	12.3	-5.1 **	-3.4	-1.7
Engagement in school	10.2	10.2	9.9	0.3 **	0.4 **	-0.1
Ever repeated a grade? (%)	5.4	3.9	3.6	1.8	0.4	1.5
Ever suspended/expelled? (%)	11.4	14.3	12.9	-1.5	1.4	-2.8
Sample size (total = 879)	306	292	281			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

quires strong assumptions. For example, quantifying the effects of income on children's well-being by comparing child outcomes for low-income versus higher-income families requires the strong assumption that the families are alike in all respects other than income. Tracing the effects of these factors on child outcomes in an experimental program is less restrictive and possibly more conclusive, because any changes in employment and income are caused by the experimental treatment.

The effects of employment and income may be isolated more clearly in an experimental framework when welfare and employment programs have an impact on only one variable. In the NEWWS Evaluation, for example, the labor force attachment program in most sites significantly increased employment but did not significantly increase income (Freedman et al., 2000). An in-depth analysis of child outcomes for selected NEWWS sites showed that, in general, impacts on children were not common and that the impacts that were found are not consistently favorable or unfavorable. Because financial incentive programs such as MFIP increase both income and employment, isolating their separate effects on child outcomes is more complicated. The effects of increases in employment and income may reinforce each other if they go in the same direction, or they may offset each other if they do not.

A. Experimental Findings

Understanding the Effects of Increased Income via MFIP's Financial Incentives. MFIP's financial incentives allowed recipients who voluntarily entered the workforce to keep more of their welfare income as their earnings increased. The impact of MFIP's financial incentives on employment was modest: incentives increased part-time employment and caused some recipients to reduce their hours worked. Consequently, children were generally less likely to be in either formal or informal child care arrangements. The dominant effect of the financial incentives was to increase income for working single mothers. Indeed, the financial incentives were primarily responsible for MFIP's antipoverty effects. Increased income likely improved child outcomes through its effects on both resources and socialization; it reduced material hardship, increased marriage, decreased maternal depression, and decreased domestic abuse.[47] Compared with the children in the AFDC group, the children in the Incentives Only group were more likely to be in a "married" two-parent family and among mothers who were less depressed, whose adult relationships were less asusive or conflictual, and who felt more financially secure (such as being able to pay bills).[48] Ultimately, MFIP's financial incentives reduced problem behavior and improved academic functioning among these children.

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[47]While the evaluation can rigorously attribute effects on family well-being (such as depression and domestic abuse) to MFIP's financial incentives, it is important to recognize that this part of the program did more than simply transfer additional money to working families. MFIP staff actively encouraged parents to take advantage of the new benefits that were available to them if they worked, and parents in the MFIP group were aware that they were being given an opportunity not available to everyone in the welfare system. Thus, with the exception of those who cut back on hours worked, it seems likely that the series of effects on family life was produced not just by a change in income but by a change in income that was linked to work and that felt to parents like an important and positive new opportunity. Even parents who did not work were provided with some additional control over their finances through the provision of Food Stamps as cash. While it is impossible to disentangle the effect of the additional income per se from the effect of *how* this income was provided for the families who increased their employment, both staff and families did report that MFIP felt like a different kind of welfare system than they had experienced in the past.

[48]It is interesting to compare the effects of MFIP's financial incentives on single-parent families with the effects on two-parent families (Miller et al., 2000). For two-parent recipient families, MFIP significantly reduced the employment of one parent and significantly increased marital stability. Because the control group (most of whom were on AFDC-UP) were also subject to participation requirements, much of the effect of MFIP was driven by the program's financial incentives and by its streamlined eligibility rules for two-parent families. The children of two-parent families appear to be doing slightly better than their counterparts in the control group (see Appendix E).

An alternative method of isolating income effects from employment effects is to identify a subgroup for whom MFIP's financial incentives had a significant and large effect on income but had no effect on employment. One such subgroup consists of respondents who were already working at random assignment — who would experience only "windfalls" from MFIP's financial incentives. Because the sample size for this subgroup (N = 100) is too small to produce reliable estimates, other subgroups were examined. For long-term recipients who were not in public or subsidized housing at the time of random assignment, MFIP's financial incentives significantly increased income but had no significant effects on participation rates or employment (not shown).[49] For this subgroup, MFIP's financial incentives also decreased children's externalizing behavior problems, increased positive behavior, and improved school engagement. These patterns confirm the prior suggested benefits to children from the independent effect of increased family income.

Another subgroup for whom MFIP's financial incentives significantly increased income but not employment consists of families whose focal children are girls. Chapter 3 compares MFIP's impacts on girls and on boys. The most pronounced effects on girls were driven by the impact of MFIP's financial incentives. For this subgroup of recipients, MFIP's financial incentives significantly increased average annual income, by $979, but had no significant effect on employment (not shown). In addition, girls in these families had significantly fewer behavior problems than boys, and they scored significantly higher on the PBS and on measures of school engagement and school performance.

Understanding the Effects of Increased Employment via the Impact of Adding Mandatory Services. The dominant effect of adding the mandatory services to MFIP's financial incentives was to increase full-time employment. With some exceptions for single mothers with children under the age of 6, the mandate required recipients to participate in employment-related activities unless they were working at least 30 hours per week. By comparing the effects of the full MFIP treatment with the effects of MFIP's financial incentives alone, the impact of adding the mandate — that is, the effect of mandating participation for recipients who would otherwise not have worked — can be isolated somewhat. Adding mandatory services to the incentives had no impact on children's negative behavior or academic achievement but did significantly decrease children's positive behavior, especially their social competence and sense of autonomy. These impacts give the first indication that increases in mothers' employment — especially mandatory, mostly full-time employment — may detrimentally affect selective aspects of children's behavior. Adding the mandatory services significantly increased mothers' use of both formal and informal child care, increased their use of stable formal care, increased material hardship, and increased the number of residential moves.

These results should be interpreted carefully. One possible interpretation is that increased employment has relatively modest overall effects on child outcomes; that is, only specific aspects of children's positive behavior were negatively affected. It is noteworthy that adding the mandatory services to the financial incentives did not affect most of the outcomes on children's problem behavior and academic functioning. These results are somewhat consistent with results from the NEWWS Evaluation that also showed increases in employment but no increases in income, despite the differences between man-

[49]The impact of MFIP's financial incentives on employment for recipients who were not in public or subsidized housing is similar in this study and in Volume 1 (Miller et al., 2000).

datory services alone (NEWWS) and adding the services to financial incentives (MFIP). Another interpretation is that children's positive experiences in child care or in new residences, due to the impact of adding the mandatory services, may have helped offset the potentially negative effects of mothers' employment; or that the potentially negative effects of child care and residential moves were offset by the beneficial effects of mothers' employment.

The subgroup defined by housing status is also useful for identifying the effects of employment on children. Because of MFIP's financial incentives, those recipients *not* living in public or subsidized housing at random assignment experienced significant increases in income but no significant increases in employment. For this subgroup, MFIP's financial incentives improved children's behavior and school engagement. In contrast, for those recipients living *in* public or subsidized housing, MFIP's financial incentives significantly increased average annual employment (double the impact for those without subsidized housing), and its effects on annual income were relatively modest (nearly $200 less on average over the three years than the impact for those not in subsidized housing; and MFIP's incentives alone did not significantly increase income in years 2 and 3). For this subgroup — with relatively larger employment increases and relatively smaller income increases — MFIP's financial incentives did not affect child outcomes (not shown).

Understanding the Effects of Increased Income and Increased Employment via the Full MFIP Program. The full MFIP program significantly increased both employment and full-time employment and, via its effect on increasing earned income, increased total family income. According to maternal reports, MFIP significantly decreased the overall level of children's behavior problems and externalizing behavior problems, and it significantly increased children's academic functioning. Note that the full MFIP program did not significantly affect children's internalizing behavior problems or any measure of positive behavior. These effects on child outcomes suggest that increases in mothers' employment that also lead to increased total family income beneficially affect or have neutral effects on various aspects of children's behavior and academic functioning. Such effects may be driven by children's experiences in formal child care and by improvements in mothers' adult relationships, or they may be driven by the offsetting or complementary effects of income, employment, and child care. In fact, the dual effects of increased income and increased employment in producing positive impacts on child outcomes is consistent across a number of subgroups (see the subgroup analyses in Section VI of Chapter 3).

Summary Based on Experimental Findings. In summary, MFIP's effects on child outcomes suggest that increases in family income that are not a result of increased full-time work may have beneficial effects on children's behavior, particularly on their internalizing behavior problems and positive behavior. Increases in employment alone (in the context of the added effect of mandatory sevices) that do not lead to increases in family income generally have neutral effects on most measures of child outcomes but may negatively affect selective aspects of children's positive behavior, particularly their social competence and autonomy. Mandating employment for single mothers who would otherwise not work may be particularly detrimental to children's positive behavior. The findings also suggest that increased income significantly improves children's academic functioning. The favorable effects on children's overall

behavior and academic functioning that result from increased family income dominate any detrimental or neutral effects arising from mothers' employment.[50]

B. Nonexperimental Findings

Nonexperimental methods may also be used to examine the effects of income or the effects of employment on children in this study. One advantage of using nonexperimental techniques is that the effects of income may be examined controlling for the effects of employment and vice versa without having to search for selected subgroups who experienced only an increase in employment or only an increase in income. Two nonexperimental techniques were used: ordinary least squares regression and instrumental variables (IV) estimation. After a brief statement of the results, the last paragraphs of this section provide more technical detail about these nonexperimental estimation techniques.

Based on results from ordinary least squares regression, the effects of income on child outcomes are generally in the positive direction,[51] whereas the effects of maternal employment on child outcomes are generally neutral or negative. The results from the IV estimation somewhat confirm these patterns but, unfortunately, are imprecise (that is, they have large standard errors); therefore, since none of the IV estimates is statistically significant, the results must be interpreted with caution.[52] These results are preliminary. Future analyses will improve on the first-stage estimates (which may lead to more precise IV estimates) and may examine alternative measures of employment and income, such as part-time versus full-time employment, and they may expand the sample to include all single parents in the MFIP evaluation.

Much of the empirical research uses nonexperimental techniques to identify the effects of income and employment on children, and, as previously discussed, there are a number of problems in drawing strong conclusions based on these estimates. Many, though not all, nonexperimental techniques do not adequately control for unobserved or unmeasured characteristics that may be associated with employment or income as well as with child outcomes. In such cases, the effects of income or employment on children may instead reflect the effects of some other characteristic — such as living in a single-parent family — that is highly correlated with income or employment as well as with that child outcome. In standard ordinary least squares regression techniques, the estimates of the effects of income or employment may be biased for the same reason; that is, they may instead reflect the effects of some other characteristic associated with income or employment as well as with that child outcome. One analytic technique that resolves these potential biases is instrumental variables (IV) estimation with experimental data.

IV estimation requires the availability of a new variable, an "instrument," which is highly correlated with employment or income but is not correlated with the child outcome (or, rather, is correlated with the child outcomes only through its effects on employment and income). IV estimation is imple-

[50]Note that the effect of mothers' employment may be neutral if the increase in hours worked implies that children are placed in high-quality child care arrangements.

[51]The one exception is a measure of performance in school. The effects of income for this outcome are negative and statistically significant at the 0.10 level. In IV estimates, the effects of income on performance in school turn positive, which suggests that the results from the ordinary least squares regression may be biased.

[52]Note that some of the estimates do have p-values that are less than 0.15.

mented in two stages. In the first stage, an equation is estimated in which the independent variable of interest, such as income, is predicted by a set of instruments and a set of control variables. The predicted measure of income is then used as a dependent variable in a second-stage equation that has the child outcome as an independent variable (for a more detailed discussion about IV estimation with experimental data, see Morris and Gennetian, 1999; and Duncan, Magnusun, and Ludwig, 1999). There must exist at least one instrument for each potentially biased variable in the second-stage equation. Experimental data offer unique instruments to predict the first stage of an IV model: the experimental program is targeted to affect the employment and income of single parents (and the effects on children may occur indirectly through effects on income and employment). Thus, in the first stage of an IV model, the MFIP data offer not one but two instruments — assignment to the MFIP group and assignment to the Incentives Only group — to predict income and to predict employment.

The effects of income and the effects of employment were examined using nonexperimental techniques for four child outcomes: the Behavioral Problems Index (BPI), the Positive Behavior Scale (PBS), school engagement, and academic performance. Income is defined as average annual income from both earnings and welfare benefits during the three-year follow-up period, and employment is defined as average quarterly employment during the three-year follow-up period. Two techniques were used: ordinary least squares regression and IV estimation. These techniques also controlled for a number of pre-random assignment and baseline characteristics, such as age, education, and marital status of the mother; history of welfare receipt; race/ethnicity; and age of the focal child. In the IV model, the two instruments used to predict income and employment are an indicator variable for assignment into the MFIP group and an indicator variable for assignment into the Incentives Only group.

C. Summary of the Effects of Income and Employment on Child Outcomes

The literature on the effects of poverty on children suggests that children's cognitive and school functioning will benefit from increases in income (for example, see Duncan and Brooks-Gunn, 1997). The literature on the effects of maternal employment on children is less conclusive. Although this literature generally finds that the effects are neutral, the empirical work has less to say about the potentially different effects of mandatory employment and of voluntary employment or the potentially different effects on preschool- and school-age children.[53] Some research suggests that there may be benefits from maternal employment for children whose mothers want to work (Farel, 1980; Alvarez, 1985) or for children of single or low-income mothers.

The findings from MFIP suggest that increases in income may benefit children's academic functioning and that increases in employment alone are generally neutral but may have negative effects on selective aspects of children's positive behavior. These results provide some evidence for the benefits of "employment and income-enhancing policies" over "employment only" policies. These results also suggest that measures of children's well-being that are collected in national surveys and are often used in nonexperimental work, such as the National Longitudinal Survey of Youth (NLSY), may not adequately

[53]Many of the studies examining the effects of employment on child outcomes do not control for income or the offsetting effects of high-quality child care. Thus, any detrimental effects of employment may be masked by beneficial effects of income or high-quality child care.

capture aspects of children's socioemotional development that may be most affected by maternal employment. The Positive Behavior Scale (PBS) is a relatively new construct that was developed for the New Chance Demonstration (Polit, 1996) to accommodate the reading levels of educationally and economically disadvantaged populations.

Findings on child outcomes from other experimental studies of welfare and employment policies, such as Milwaukee's New Hope Project and the Canadian Self-Sufficiency Project (SSP), generally corroborate the evidence presented for MFIP. The New Hope program increased income and employment for families who were not working, and it reduced hours worked for families who were working full time (allowing them to have the same amount of income as when they worked full time). Teachers reported that boys in New Hope families had fewer classroom behavior problems and improved academic performance. SSP increased full-time employment and total family income for Income Assistance recipients, and impacts on children suggest some improvements in cognitive and academic functioning for early-school-age children. The increased employment across many sites in the NEWWS Evaluation (measuring the pure effects of mandatory services) reflects a mix of employment among mothers who would have worked if in a program that offered a financial incentive and mothers who may not have worked if in a program that offered a financial incentive.[54] Few consistently unfavorable or favorable effects were found for their very young, 5- to 7-year-old children.

[54]There are a number of other possible explanations for why findings from the NEWWS Evaluation may not be comparable to findings from MFIP about the effects on children of adding mandatory services to financial incentives. The samples of families in the MFIP and the NEWWS child studies differ in three ways: (1) MFIP's beneficial effects on children focus on the sample of long-term recipients, whereas the NEWWS sample includes applicants as well; (2) MFIP's mandate exempted only single mothers with a child under the age of 1, whereas two of the NEWWS sites exempted single mothers with a child under the age of 3; and (3) children in the MFIP child study were age 5 to 12 at the interview date, whereas children in the NEWWS study were age 5 to 7. Finally, in MFIP, a negative effect on children of adding mandatory services to financial incentives was found only on an outcome measuring aspects of social competence and autonomy. Similar outcomes were not measured in the NEWWS study, although it did measure social compliance. It is interesting that social compliance may be most closely related to children's problem behavior and that children in both the NEWWS Evaluation and MFIP generally did not fare worse on these measures as a result of increased maternal employment.

Chapter 5

MFIP's Effects on the Children of Recent Applicants in Urban Counties

This chapter reviews the findings from the Minnesota Family Investment Program (MFIP) about the effects of MFIP on children in recent applicant families and compares these findings with the effects on children in long-term recipient families (as discussed in Chapters 3 and 4). Section I begins by summarizing the results for children of recent applicants. Next, Section II presents a selective overview of the effects of MFIP's financial incentives on family and child outcomes, followed by a selective overview of the effects of adding mandatory services to the financial incentives. To help understand why the effects of MFIP on children of recent applicants differ from the effects on children of long-term recipients, Section III examines the outcomes by welfare status, compares the impacts on maternal employment and earnings for recent applicants and for long-term recipients, and examines the effects of MFIP on selected subgroups of recent applicants.

I. Summary of the Main Findings

Figure 5.1 presents a summary of MFIP's impacts on recent applicants, again matching the format of the conceptual model in Chapter 1 (Figure 1.2). Although all recent applicants were offered financial incentives to work during the entire 36-month follow-up period, only slightly more than half were required to participate in employment services by the end of follow-up. Therefore, the impacts of adding mandatory services to financial incentives assess the effects on employment, earnings, and income of those recent applicants who heard a message about MFIP's participation requirements as well as the effects on those who were actually eligible — or, alternatively, those who stayed on welfare long enough to be subject to the participation mandate. The findings below focus on MFIP's impacts (that is, impacts of the full MFIP program) rather than on the impacts of MFIP's components (financial incentives alone or adding mandatory services).[55] It is important to note that, because of small sample sizes, the impacts of MFIP's financial incentives alone are imprecise and should be interpreted with caution.[56]

- **Children in MFIP generally fared similarly to children in AFDC.**

MFIP had few systematic impacts on young children. Of the child outcomes evaluated for focal children, recent applicants in MFIP reported significant differences on only one outcome — higher levels of children's suspensions and expulsions (4.4 percentage points) — compared with AFDC recipients.[57]

[55]As discussed in Appendix B, a nonresponse bias analysis indicated that impact estimates of MFIP's financial incentives had to be adjusted to control for pre-random assignment characteristics. In this case, controlling for these characteristics ensures that the impact estimates are not biased.

[56]Appendix E presents impact results from a larger sample of selected schooling outcomes measured for all children of recent applicants in the core sample.

[57]However, there is some indication that MFIP negatively affected some outcomes for adolescent children of the full evaluation sample. See Appendix E.

Figure 5.1

Summary of the Significant Effects of MFIP on Child Outcomes for Recent Applicants in Urban Counties

MFIP Program Implementation	Direct Outcomes	Intermediate Outcomes	Child Outcomes
Provision of services	↑ **Participation in employment-related activities**	*Resources*	Behavioral Problems Index
Provision of message	↑ **Employment**	Material hardship	Positive Behavior Scale
	Earnings	Public housing	Behavioral problems at school
	↑ **Welfare benefits**	Food security	Health
	Total income[a]	↑ **Health insurance**	Academic functioning
	Measured poverty[a]	Child care	
		Quality of home environment	
		Safety of neighborhood	
		Socialization	
		Fertility	
		Marriage	
		Domestic abuse	
		Maternal depression	
		Parenting behavior	

NOTES: Any significant difference, at least at the .10 level, between the program group and the control group (the impact) is indicated in bold. The arrows next to bold items indicate the direction of the impacts.

Outcomes within each column may also interact with or influence each other.

[a]Calculated based on the sum of income from benefits and earnings.

- **MFIP increased recent applicants' full-time employment and welfare income but had no impact on earnings.**

MFIP had a small impact on recent applicants' overall employment, especially full-time employment, and it significantly increased their welfare income. MFIP's financial incentives alone primarily increased welfare receipt and welfare income, whereas adding the mandatory services increased full-time employment. MFIP had no impact on income measured from earnings and welfare or on measured poverty.

- **Children of recent applicants in MFIP were more likely than children in AFDC to have continuous health insurance coverage.**

MFIP increased the likelihood that children had continuous health insurance coverage, particularly coverage by Medicaid or MinnCare.

- **For recent applicants, MFIP had no impacts on child care, marriage, maternal depression, or domestic abuse, but it did increase harsh parenting.**

MFIP had no significant impacts on the use of child care, on mothers' being married or depressed, or on reports of domestic abuse. MFIP did significantly increase the frequency of harsh parenting, such as scolding or losing one's temper.

- **Compared with the effects of the full MFIP program, MFIP's financial incentives alone had some negative effects on recent applicant families and children, but these effects should be interpreted with caution because of small sample sizes.**

MFIP's financial incentives had no impacts on employment or income but did increase the receipt and amount of welfare benefits. Recent applicants in the Incentives Only group reported that their children were more likely to perform below average in school and were less engaged in school compared with children in AFDC families. There were no significant differences in reports of children's behavior between recent applicants in the Incentives Only group and the AFDC group. By encouraging families to be tied to the welfare system, MFIP's financial incentives were primarily responsible for MFIP's impact on children's continuous health insurance coverage. In addition, MFIP's financial incentives increased the likelihood that recent applicant families resided in public or subsidized housing and had enough food to eat. MFIP's financial incentives affected the quality of parenting and the quality of the home environment; the incentives were primarily responsible for increased harsh parenting, increased maternal depression, and increased cohabitation with someone other than the biological parent of the child.

- **Whereas MFIP produced positive results across a wide range of outcomes for long-term recipients, MFIP's effects on recent applicants were less consistent.**

For long-term recipients, MFIP increased employment and income, increased marriage and the use of child care, decreased domestic abuse, and improved child outcomes. For recent applicants, MFIP had a small effect on increasing full-time employment but no effects on child outcomes. In particular, the effects of MFIP's financial incentives were different for these two groups of welfare families. For long-term recipients, it was primarily the financial incentives that improved child outcomes; for recent applicants, financial incentives had the opposite effect on child outcomes and also increased maternal depression and harsh parenting. Recent applicants may have sought out public assistance during a time of crisis or transition in their lives. One theory is that these recent applicants were not

time of crisis or transition in their lives. One theory is that these recent applicants were not accustomed to being on welfare and were anxious to work but that MFIP's financial incentives prolonged welfare assistance and provided little help in finding work.

A number of possible explanations arise for the different and opposite effects of MFIP and its financial incentives on long-term recipients and recent applicants. First, it is important to note that, in general, children of recent applicants fare better on a number of child outcomes and thus have less room for improvement compared with children of long-term recipients. Second, recent applicants are relatively more heterogeneous compared with long-term recipients in terms of their demographic characteristics as well as their current and future experience with public assistance.

In many cases, recent applicant families may not represent the "stereotypical" welfare recipient family. Their entrance into the welfare system may be a dramatic economic shift into poverty that occurs simultaneously with other family upheaval. This has two implications. First, MFIP encourages single mothers to work and to take advantage of its benefits via financial incentives; but because there are no services offered at the time they apply for welfare, if they want to enter employment but do not know how, MFIP's financial incentives alone may add stress and frustration to their lives.[58] Although Minnesota's traditional welfare-to-work program, STRIDE, was available to this group, it was not heavily marketed and was primarily focused on education. Second, it may be detrimental to prolong a recent applicant's dependence on welfare (or those who try to leave welfare) by working. The stigma effects of prolonged welfare may be much greater for recent applicants than for long-term recipients, who have already had long spells on welfare.

II. Overview of MFIP's Effects on Recent Applicants and Their Children

Approximately 30 percent of recent applicant families in the MFIP program group accumulated 24 months of welfare receipt by the end of the second year after random assignment, and 57 percent accumulated 24 months of welfare receipt by the end of the follow-up period. [59,60]

Descriptions of how the following outcomes were measured can be found in Appendix C and are interspersed in text boxes throughout Chapter 3.

Employment, Earnings, Income, and Resources. Table 5.1 presents MFIP's impacts on participation, employment, earnings, welfare, and income for recent applicants. The average quarterly

[58]A study by Hock and DeMeis (1990) found that women who preferred employment but remained at home reported higher levels of depressive symptoms. This provides some support for the hypothesis that MFIP's financial incentives may increase feelings of conflict between work and welfare for single-mother recent applicants and consequently may lead to stress, frustration, or depression.

[59]The proportions of recent applicant families who actually hit the time trigger are approximate estimates calculated by counting the number of months that a recent applicant was on welfare from one year prior to random assignment. These approximations may be underestimated, because some recent applicants were on welfare for longer than one year prior to random assignment (see Table 2.1); or the approximations may be overestimated, because some of those who accumulated 24 months of welfare receipt were already working at least 30 hours per week and thus were exempt from MFIP's participation mandate.

[60]The subgroup of short-term recipients at baseline, or those recent applicants who were on welfare for less than two years at random assignment, were more likely to experience the full MFIP intervention. Nearly 88 percent of short-term recipients in the MFIP group accumulated 24 months of welfare during the 36-month follow-up period. Unfortunately, the sample for this group is relatively small (N = 289).

employment rate of recent applicants in the control group (71.2) was much higher than the average quarterly employment rate of long-term recipients (57.7 in Table 3.1). According to employment measured from administrative records data, MFIP had no significant impact on the overall average quarterly employment rate for recent applicants. However, survey measures of employment show that MFIP increased overall employment by 4.7 percentage points and increased full-time employment by 9.4 percentage points compared with the rates of AFDC families. Recent applicants in MFIP were significantly more likely to earn very low wages, under $5 per hour, compared with AFDC families (not shown). MFIP had no significant impact on earnings, though earnings were smaller relative to AFDC families, and MFIP significantly increased the likelihood of combining welfare and earnings (not shown).

MFIP's financial incentives had small but statistically insignificant effects on average quarterly employment rates over the three-year follow-up period. Driven by MFIP's financial incentives, the reduction in average annual earnings (- $1,168), though not significant, suggests that mothers reduced their hours worked.[61] Nearly each dollar lost in earned income was offset by a dollar gained in welfare assistance ($1,158). Consequently, average annual income from earnings and welfare over the three-year follow-up period was similar for the MFIP group and the ADFC group, but a greater proportion of income for the MFIP group came from public assistance.[62]

Adding mandatory services to financial incentives increased recent applicants' participation in employment-related activities by 14.2 percentage points and increased their full-time employment by 7.8 percentage points. Though the impacts on employment are not statistically significant, their pattern suggests that the effects of adding mandatory services to incentives were to increase average annual earnings ($548), decrease average annual welfare payments (- $401), and slightly increase average annual income ($147). Adding mandatory services to incentives also increased recent applicants' earnings by year 3 of follow-up (not shown).

Table 5.2 presents MFIP's impacts on recent applicants' housing, food security, and health insurance coverage. Compared with long-term recipients in the control group, recent applicants reported similar levels of food security (85.6 versus 80.1 in Table 3.3) and health insurance coverage for their children (62.7 versus 67.0 in Table 3.3). MFIP significantly increased continuous health insurance coverage for children in recent applicant families, by 7.2 percentage points, and again the increased coverage was primarily by Medicaid or MinnCare. MFIP's financial incentives alone significantly affected housing, food security, and health insurance coverage;

[61]In the survey, recent applicants in the Incentives Only group reported significantly lower earnings in the month prior to the interview, compared with AFDC families (not shown).

[62]Note that for the core sample of recent applicants, evaluated in Volume 1, the increased welfare income from MFIP more than offset any loss in earnings and consequently did significantly increase average quarterly income from earnings and welfare.

Table 5.1

MFIP's Impacts on Participation, Employment, Earnings, Welfare, Income, and Poverty for Recent Applicants in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Participation, employment, and earnings since random assignment (%)						
Ever participated in an employment-related activity (from administrative records) (%)	75.1	60.9	64.8	10.3 **	-3.9	14.2 ***
Average quarterly employment (from administrative records) (%)	74.6	73.9	71.2	3.3	2.6	0.7
Worked since random assignment (from survey) (%)	93.0	89.1	88.3	4.7 *	0.8	4.0
Average annual earnings ($)	6,817	6,270	7,438	-620	-1,168	548
Hours worked in current or most recent job (%)						
Worked full time	74.7	66.9	65.3	9.4 **	1.6	7.8
Worked part time	17.9	21.4	23.2	-5.3	-1.8	-3.5
Welfare benefits						
Average quarterly receipt rate (%)	72.4	73.9	66.2	6.3 **	7.8 **	-1.5
Average annual welfare benefit ($)	4,530	4,930	3,772	757 ***	1,158 ***	-401
Income and poverty since random assignment						
Average annual income from welfare and earnings ($)	11,347	11,200	11,210	137	-10	147
Measured poverty[a] (%)	63.6	66.8	70.2	-6.6	-3.4	-3.2
Income and poverty since random assignment with estimated EIC[b]						
Average annual income from welfare and earnings with estimated EIC ($)	12,283	12,288	11,991	292	298	-6
Measured poverty with EIC[a] (%)	52.7	58.4	58.4	-5.6	0.1	-5.7
Sample size (total = 652)	258	135	259			

(continued)

Table 5.1 (continued)

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and welfare benefit records.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

[a]Measured poverty is defined as the percent of families whose earnings plus welfare benefits are below the official poverty threshold. The appropriate threshold is determined by the number of children in the family. Because the measure of income used here includes earnings, cash welfare, and Food Stamp benefits, but does not include income from other sources, the measured poverty rate presented here is not comparable with the official poverty rate.

[b]These estimates are calculated assuming that all eligible individuals receive both the federal and the state Earned Income Credit (EIC). Estimated payroll taxes and federal and state income taxes are also subtracted.

Table 5.2

MFIP's Impacts on Material Hardship, Food Security, and Health Insurance for Recent Applicants in Urban Counties

Outcome	Average Outcome Levels: MFIP	MFIP Incentives Only	AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Material hardship						
Perceptions of financial strain	2.7	2.8	2.7	0.0	0.1	-0.1
Index of material hardship	1.4	1.4	1.4	0.0	0.0	0.0
Own home (%)	28.2	20.6	27.6	0.6	-7.1	7.6
Live in public or subsidized housing (%)	10.7	17.2	9.8	0.9	7.4 **	-6.4 *
Live in other housing (%)	60.9	62.1	62.6	-1.7	-0.5	-1.1
Food security						
In last month, family had enough to eat (%)	90.1	93.1	85.6	4.5	7.5 **	-3.0
In the last month, did any children skip a meal because not enough money for food? (%)	4.3	1.9	4.1	0.2	-2.2	2.4
Health insurance						
Children continuously covered by health insurance during past 36 months (%)	69.9	76.0	62.7	7.2 *	13.3 **	-6.1
In the last month, were children covered by Medicaid or MinnCare? (%)	55.3	57.3	43.2	12.1 ***	14.2 ***	-2.1
In last month, were children covered by private insurance? (%)	36.5	36.7	42.2	-5.7	-5.5	-0.2
Sample size (total = 652)	258	135	259			

(continued)

Table 5.2 (continued)

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

although the incentives had no significant effect on material hardship, families in the Incentives Only group were more likely to live in public or subsidized housing. MFIP's financial incentives also increased the likelihood by (7.5 percentage points) that recent applicant families had enough food to eat, compared with AFDC families. Finally, MFIP's financial incentives significantly increased the continuity of health insurance coverage for children during the follow-up period. These impacts likely resulted from the role of MFIP's financial incentives in encouraging and increasing ties to the welfare system. Further evidence in support of this is that adding mandatory services to incentives had no impacts on food security and health insurance coverage, as shown in the last column of Table 5.2. However, one effect of adding mandatory services to incentives was to decrease recent applicants' residency in public or subsidized housing and to increase their residency in private homes.

Child's and Family's Environment. Table 5.3 presents MFIP's impacts on recent applicants' use of child care and on their home environment and neighborhood. Full MFIP and MFIP's Incentives Only generally had no significant impacts on child care, home environment, neighborhood quality, or number of moves.[63] It is interesting that MFIP decreased sibling care during the follow-up period and that children spent fewer hours in child care during the week prior to the interview (not shown). This is not surprising, because recent applicants significantly reduced their hours worked in response to MFIP's financial incentives. Even though MFIP's financial incentives did not significantly affect the HOME score, interviewers who assessed the home environment reported that children in the Incentives Only group were more likely to live in a home with cluttered rooms, a building with health hazards, and a relatively unkempt neighborhood compared with children in the AFDC group (not shown). Children in the MFIP's Incentives Only group were also significantly less likely to move.

Adding mandatory services to financial incentives increased the likelihood that children were in formal child care, by 9.5 percentage points, and significantly increased the likelihood that children experienced a residential move. (As previously discussed, the move may reflect a higher likelihood that MFIP families moved from public or subsidized housing to a private home or a lower likelihood that AFDC families moved out of public or subsidized housing.)

Parent-Child Relationships and Family Functioning. Table 5.4 summarizes MFIP's impacts on recent applicants' household composition, psychological functioning, domestic abuse, and parenting behavior. On average, recent applicants in the control group reported much higher levels of marriage compared with long-term recipients, 20.8 percent versus 6.2 percent (see Table 3.7). Fewer recent applicants were at high risk of dinical depression (20.6 versus 31.6 percent in Table 3.7), and fewer reported ever being abused in the past three years (49.1 versus 59.6 percent in Table 3.7). MFIP had no significant impacts on recent applicants' marital status and fertility, depression, or domestic abuse. MFIP did significantly increase harsh parenting, such as scolding and threatening, and the frequency of harsh parenting.[64]

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[63]MFIP also had no significant impact on the modified Home-Short Form (HOME-SF) cognitive stimulation subscale constructed to be comparable with the studies in the Project on State-Level Child Outcomes.

[64]MFIP also had no significant impact on various alternative constructions of the parenting outcomes. For example, on the parenting scales, MFIP had no impacts on scoring above the 75th percentile or below the 25th percentile relative to the control group.

Table 5.3

MFIP's Impacts on the Child's Environment for Recent Applicants in Urban Counties

Outcome	Average Outcome Levels: MFIP	MFIP Incentives Only	AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Child care used since random assignment						
Never used child care (%)	13.1	16.5	12.2	0.9	4.3	-3.4
Formal child care (%)	53.7	44.1	48.8	4.9	-4.6	9.5 *
Informal child care (%)	73.9	73.9	76.6	-2.7	-2.7	0.0
Self-care (%)	20.3	18.3	18.1	2.2	0.2	2.1
Quality of home environment						
Total HOME scale	78.4	78.3	78.7	-0.3	-0.4	0.1
Neighborhood						
Live in a safe neighborhood (%)	83.2	81.1	83.1	0.1	-2.0	2.1
Number of moves since random assignment	1.8	1.3	1.6	0.1	-0.4 **	0.5 ***
Sample size (total = 652)	258	135	259			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

Table 5.4

MFIP's Impacts on Household Composition, Psychological Functioning, Domestic Abuse, and Parenting Behavior for Recent Applicants in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Marital status and fertility						
Had a child since random assignment (%)	23.5	25.3	22.5	1.0	2.8	-1.8
Currently married and living with spouse (%)	23.5	14.0	20.8	2.7	-6.9	9.6 **
Currently cohabiting (%)	14.0	18.5	10.7	3.3	7.9 **	-4.5
Maternal psychological functioning and domestic abuse						
Depression scale	15.3	16.7	14.2	1.0	2.5 *	-1.4
At risk of chronic depression (%)	22.0	23.4	20.6	1.5	2.9	-1.4
Ever abused in past 3 years (%)	48.6	54.0	49.1	-0.4	5.0	-5.4
Parenting behavior						
Aggravation scale	1.8	1.8	1.7	0.0	0.1	-0.1
Feeling less aggravated (%)	93.8	94.0	96.6	-2.8	-2.6	-0.2
Warmth scale	3.5	3.4	3.4	0.1	-0.1	0.2 *
Harsh-parenting scale	1.7	1.7	1.5	0.1 **	0.2 ***	-0.1
Frequency of harsh parenting	2.3	2.4	2.1	0.2 *	0.3 ***	-0.1
Supervision scale	4.6	4.6	4.6	-0.1	-0.1	0.0
Sample size (total = 652)	258	135	259			

SOURCE: MDRC calculations using data from the 36-month survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

MFIP's financial incentives alone, however, did affect cohabitation among recent applicants. Those in the Incentives Only group were 7.9 percentage points more likely to cohabit than those in the AFDC group. Only a very small proportion of cohabiting relationships were with the biological father of the focal child (not shown). Considered from the perspective of the child, it is difficult to say whether these partnerships involved the intermittent presence of a second adult in the household or the stable presence of a father figure with a long-term commitment to the mother and child. MFIP's financial incentives also significantly increased the likelihood that children lived with extended family members, such as grandparents, uncles, and aunts (not shown). Adding mandatory services to incentives significantly increased marriage among recent applicants, by 9.6 percentage points.

Relative to mothers in the AFDC group, recent applicants in the Incentives Only group scored higher on the Center for Epidimiological Studies-Depression (CES-D) scale, though they were not significantly more likely to be at high risk of clinical depression; and although the impact is not statistically significant, they scored higher on the aggravation scale (p-value of 0.14). MFIP's financial incentives also increased harsh parenting as well as the frequency of harsh parenting relative to AFDC families. Adding mandatory services to financial incentives had no effect on depression for recent applicants but did significantly increase warm parenting.

Child Outcomes. Table 5.5 presents MFIP's effects on child outcomes among recent applicants and generally shows no significant impacts.[65] Of the many child outcomes analyzed, MFIP significantly increased only the likelihood that a focal child was suspended or expelled from school, by 4.4 percentage points. This impact is not so compelling, however, because there is a lack of consistency in MFIP's effects on other academic and schooling outcomes.[66] Neither financial incentives alone nor adding mandatory services had significant effects on children's behavior. However, recent applicants in the Incentives Only group did report that, compared with children in the control group, their children performed significantly worse in school and were significantly less likely to be highly engaged in school. In contrast, adding mandatory services to financial incentives had a generally neutral effect on children's academic functioning and actually reduced grade repetition by 3.8 percentage points.

Subgroups. In Chapter 3, MFIP's effects were presented for four subgroups defined by age of the child, gender of the child, race/ethnicity, and level of family disadvantage. These same subgroups of recent applicants were examined to see whether average impacts for all families may be masking positive or negative effects that MFIP had on certain types of families. Only the effects of full MFIP are discussed here (tables are not shown). Section III provides a more detailed examination of the effects of MFIP's financial incentives alone.

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[65]MFIP also had no significant impacts on various alternative constructions of the child outcomes, including measures of the BPI and PBS that were constructed to be comparable with the studies in the Project on State-Level Child Outcomes. For example, on the scales measuring problem behavior and positive behavior, MFIP had no impact on scoring above the 75th percentile or below the 25th percentile relative to the control group.

[66]An analysis of selected schooling outcomes measured for all children in recent applicant families in the core sample shows that MFIP had pronounced negative effects on grade performance and grade repetition and on mothers' being contacted by the school about behavioral problems of children age 10 or older at the time of random assignment (see Appendix E). The impacts of MFIP on school suspensions and expulsions is consistent with these impacts for adolescents.

Table 5.5

MFIP's Impacts on Maternal Reports of Children's Behavior, Health, and Academic Functioning for Recent Applicants in Urban Counties

Outcome	Average Outcome Levels: MFIP	Average Outcome Levels: MFIP Incentives Only	Average Outcome Levels: AFDC	MFIP vs. AFDC: Impacts of Full MFIP Program	MFIP Incentives Only vs. AFDC: Impacts of Financial Incentives Alone	MFIP vs. MFIP Incentives Only: Impacts of Adding Mandatory Services and Reinforced Incentive Messages
Behavior						
Behavioral Problems Index	10.8	10.7	9.8	1.0	0.9	0.1
Positive Behavior Scale	196.8	196.6	200.0	-3.2	-3.4	0.3
Contacted by school about child's behavioral problems? (%)	22.5	26.8	24.7	-2.2	2.1	-4.3
Child in special education? (%)	15.5	14.8	17.4	-1.9	-2.7	0.7
Health						
Child's health rated by mother as very good or excellent (%)	77.2	81.1	78.7	-1.4	2.4	-3.9
Academic functioning						
Performance in school	4.2	4.1	4.3	-0.1	-0.2 *	0.1
Performance is below average (%)	8.2	9.6	5.1	3.1	4.5	-1.4
Engagement in school	10.2	10.0	10.4	-0.2	-0.5 **	0.3
Ever repeated a grade? (%)	2.0	5.8	4.6	-2.6	1.2	-3.8 *
Ever suspended/expelled? (%)	10.5	8.5	6.2	4.4 *	2.3	2.0
Sample size (total = 652)	258	135	259			

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

Although there were no significant differences between the effects of MFIP on the employment and income of mothers of boys versus girls, MFIP increased the welfare income of mothers of girls, and thus the increased total average income from earnings and welfare for MFIP families with boys was lower than for MFIP families with girls. There were no significant differences among the effects of MFIP on the economic outcomes of mothers with children in different age groups. Compared with the control group, MFIP boys scored lower on school engagement, and children under age 6 were more likely than older children to score lower on school engagement. Compared with other racial/ethnic subgroups, only white children scored lower on school engagement, and they were more likely to perform below average in school than their control group counterparts. Interestingly, MFIP had no significant impacts on the employment and income of white parents but had significant positive impacts on the employment and income of black parents. Some of MFIP's negative effects occurred for the children of mothers who were the least disadvantaged — mothers who had a high school diploma and recent employment experience. MFIP very modestly increased the employment of these mothers but had no significant effect on their income. The children of the least disadvantaged mothers performed more poorly in school compared with children in the control group. These patterns did not occur for the subgroup of mothers who were relatively more disadvantaged.

In summary, these results suggest that some of MFIP's average effects for all families may be masking negative and, in some cases, positive effects that MFIP had on certain types of recent applicant families. For the most part, MFIP's negative effects on children occurred in families who experienced no effects on employment and income. One subgroup — black families — did experience significant increases in employment and income due to MFIP. Given these mixed results, it is difficult to assess their implications without further analysis, especially since sample sizes are quite small for some subgroups.

III. Why Did MFIP's Effects on Children of Recent Applicants Differ from Its Effects on Children of Long-Term Recipients?

According to maternal reports, children of long-term recipients in MFIP had fewer behavioral problems than children of AFDC families, scored higher on the PBS, and were more likely to be engaged in school and to perform better academically. Long-term recipients gained more from MFIP: increased employment, increased earnings, and higher income from earnings and welfare benefits. MFIP's financial incentives contributed to nearly all of the program's beneficial effects on children of long-term recipients. Contrary to expectations, however, the findings for recent applicants suggest that MFIP's financial incentives had a detrimental effect on children's academic functioning. Adding mandatory services to the incentives had somewhat neutral effects on children of recent applicants, although the patterns are similar to the patterns for children of long-term recipients — which is not surprising, because recent applicant families are likely to resemble long-term recipient families by the time they are eligible for mandatory services.

The impacts of MFIP and of its financial incentives on children of recent applicants and on children of long-term recipients may have differed for at least three reasons. First, MFIP's effects might be expected to be neutral if there were less room for improvement among children of recent applicants; in

general, recent applicants' children fared better on a number of child outcomes than did children of long-term recipients. Second, MFIP affected recent applicant mothers differently (in terms of employment and earnings), leading to different pathways by which these outcomes affected their children. Third, recent applicants were a heterogeneous group compared with long-term recipients; by prolonging their spells on welfare, MFIP's financial incentives may have contributed to the stress, frustration, and challenges of parenting and of trying to get off welfare. Each of these reasons for MFIP's different effects is examined below.

In What Ways Did Children of Recent Applicants and of Long-Term Recipients on AFDC Fare Differently? To assess whether children of recent applicants fared better on child outcomes than children of long-term recipients, one can compare outcomes within the control groups, who received only AFDC's benefits. Table 5.6 shows that, on average, children of recent applicants on AFDC performed better on a number of child outcome measures than did children of long-term recipients on AFDC. According to maternal reports, children of recent applicants scored 3 points lower on the BPI, scored 5 points higher on the PBS, were 7 percentage points less likely to perform below average in school, were slightly more likely to be engaged in school, and were nearly 7 percentage points less likely to be suspended or expelled from school. Thus, for the AFDC groups, there was less room for improvement among children of recent applicants than among children of long-term recipients. Although this does not completely explain why MFIP's financial incentives had a negative impact on academic functioning, it nonetheless is interesting that — even with the detrimental effects of MFIP's financial incentives — children of recent applicants did better on average than children of long-term recipients.

How Did MFIP's Effects on Employment and Earnings Differ Between Recent Applicants and Long-Term Recipients? Tables 4.1 and 4.2 present the impacts of MFIP on employment, earnings, and income for long-term recipients, and Table 5.1 does the same for recent applicants. Except for the impacts of adding mandatory services to financial incentives, MFIP clearly had dramatically different effects on increasing the employment and earnings of these two welfare populations. For both recent applicants and long-term recipients, however, MFIP's financial incentives had somewhat similar effects: decreased earnings, or hours worked, and increased welfare income. Yet for recent applicants the increase in welfare income was offset dollar for dollar by a decrease in earned income. Consequently, for recent applicants, MFIP's financial incentives did not lead to an increase in measured income, as was the case for long-term recipients.

More important is that, despite these similar patterns, MFIP's financial incentives had opposite effects on the hypothesized pathways by which employment and income may have affected children. For long-term recipients, MFIP's financial incentives decreased depression and decreased the frequency of harsh parenting — effects likely linked to the decrease in hours worked. For recent applicants, however, the financial incentives increased depression and harsh parenting. Whereas the incentives increased marriage (and increased marriage to the biological father) among long-term recipients, it increased cohabitation — a much less stable arrangement — among recent applicants. Interviewers also reported that, because of MFIP's financial incentives, children of recent applicants were more likely to live in a home that was visibly cluttered and in a building and neighborhood that were not well kept or safe. In summary, MFIP's financial incentives decreased the quality of the home environment (both the physical environment and the parent-child interaction) for children of recent applicants and seemed to improve some aspects of the home environment for children of long-term recipients.

Table 5.6

Means and Standard Deviations of Child Outcomes in AFDC Families, by Welfare Status at Random Assignment

Outcome	Recent Applicants Mean	Recent Applicants Standard Deviation	Long-Term Recipients Mean	Long-Term Recipients Standard Deviation
Behavior				
Behavioral Problems Index	9.8	7.2	12.6	10.4
Positive Behavior Scale	199.2	31.1	194.4	39.1
Contacted by school about child's behavioral problems? (%)	23.2	–	33.6	–
Health				
Child's health rated by mother as very good or excellent (%)	79.2	–	77.7	–
Academic functioning				
Engagement in school	10.4	1.7	9.9	1.9
Performance in school	4.3	0.9	4.0	1.1
Performance is below average (%)	5.2	–	12.3	–
Ever repeated a grade? (%)	4.4	–	3.6	–
Ever suspended/expelled? (%)	5.7	–	12.5	–
Sample size	259		281	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

Sample size may slightly vary for each outcome variable.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

How Did Recent Applicants Differ from Long-Term Recipients? Both observable and unobservable characteristics may be associated with the reasons why single mothers slip into poverty, enter welfare, or remain poor and on welfare. As a group of single mothers who became poor and remained poor, the long-term recipients in this study are a far more homogeneous welfare population than are the recent applicants. In general, for some recent applicants, a spell on public assistance is a one-shot experience during a period of need. For others, spells on public assistance occur frequently but intermittently. Still other recent applicants may come to rely continually on the public assistance system. It is these recent applicants who are likely to slip into poverty, remain poor, and make up the future population of long-term recipients.

In any of these scenarios, a recent applicant's slip into poverty may be occurring simultaneously with other family upheaval, such as divorce or job loss. In many ways, recent applicant families may not represent a "stereotypical" welfare family and may be more vulnerable to the detrimental stigma effects of welfare assistance or to the stress associated with wanting to get off welfare. These conditions have important implications for children. Young children are affected the most during the first few years after a divorce or separation (McLanahan, 1997). The experience of a job loss may have similar effects in a family. Elder's early work on the effects of the Great Depression suggests that job loss increases negative parenting (as summarized in Elder et al., 1992).

Table 2.1 presents a number of baseline characteristics comparing this study's recent applicants and long-term recipients. The recent applicants were more likely to have experienced a divorce or separation, to be white, to have been working at random assignment, to have had some earnings in the year before random assignment, and to have had slightly higher levels of education. Compared with the long-term recipients, more of the recent applicants expressed a preference for going to school to learn a job skill; fewer of them were likely to agree that being on welfare provided for their family better than working; and they were much more likely to agree that they did not know family, friends, or neighbors who were on welfare. These baseline characteristics support the hypothesis that recent applicant families may not be stereotypical at-risk families.

Separation or divorce and job loss are two events that may force families to slip unexpectedly into poverty and to rely on public assistance. If MFIP's financial incentives negatively contribute to these events by prolonging welfare assistance, then the detrimental effects of the incentives on the quality of children's environments should be most pronounced for these particular subgroups. Table 5.7 compares the impacts of MFIP's financial incentives on selected outcomes for recent applicants who were separated or divorced at baseline with the impacts for those who were never married at baseline. The effect of MFIP's financial incentives on measured income was in the positive direction for never-married mothers, compared with separated or divorced mothers, and there were smaller and fewer significant effects on parenting.

The strongest contrast between separated or divorced recent applicants and those who never married is seen in the impacts on depression. MFIP's financial incentives significantly increased depression among separated or divorced recent applicants, and their probability of being at high risk of clinical depression was significantly different from the risk for never-married recent applicants. Similarly, MFIP's financial incentives did not affect harsh parenting, supervision of children, or the likelihood of cohabitation for never-married recent applicants but did have significant impacts on many of these outcomes for separated or divorced recent applicants. The

Table 5.7

The Impacts of MFIP's Financial Incentives on Selected Family and Child Outcomes for Recent Applicants, by Marital Status at Baseline

Outcome	Separated or Divorced			Never Married			P-values for Variation of Impacts Across Subgroups
	MFIP Incentives Only	AFDC	Impacts (Difference)	MFIP Incentives Only	AFDC	Impacts (Difference)	
Direct Outcomes							
Average quarterly employment (%)	74.4	73.8	0.6	71.5	68.7	2.8	0.80
Average annual earnings ($)	6,861	8,497	-1,636	5,132	6,216	-1,084	0.71
Average annual welfare benefit ($)	4,509	3,296	1,213 ***	5,926	4,579	1,347 ***	0.85
Average annual income ($)	11,370	11,793	-423	11,058	10,796	262	0.61
Intermediate Outcomes							
Currently cohabiting (%)	18.3	8.9	9.4 *	18.4	13.3	5.0	0.64
HOME scale	79.3	79.7	-0.5	76.2	77.3	-1.1	0.73
Maternal depression scale	16.4	13.1	3.2 *	17.2	16.6	0.6	0.34
At high risk of clinical depression (%)	28.8	18.6	10.2	17.1	25.9	-8.8	0.08 *
Aggravation scale	1.8	1.7	0.2 *	1.8	1.8	0.0	0.21
Harsh-parenting scale	1.7	1.5	0.2 **	1.7	1.6	0.1	0.73
Frequency of harsh parenting	2.4	2.1	0.3 *	2.5	2.2	0.2	0.81
Supervision scale	4.5	4.7	-0.2	4.6	4.6	0.0	0.32
Child Outcomes							
Behavioral Problems Index	10.7	9.6	1.1	10.7	10.5	0.2	0.65
Positive Behavior Scale	192.8	200.5	-7.8	200.2	199.8	0.4	0.34
Performance in school	4.1	4.3	-0.2	4.0	4.3	-0.2	0.73
Engagement in school	9.9	10.4	-0.5 *	9.9	10.4	-0.5	0.98
Ever repeated a grade (%)	4.4	4.3	0.2	7.4	6.0	1.5	0.81
Sample size (total = 509)	158	166		97	88		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

impacts on child outcomes are not as striking. Even though the children of separated or divorced recent applicants scored significantly lower on engagement in school, the magnitude of this impact is similar to its magnitude for children of never-married recent applicants.

Table 5.8 compares the impacts of MFIP's financial incentives on selected outcomes for a subgroup of recent applicants who either had earnings the year prior to random assignment or did not. Although these comparisons do not perfectly measure job loss or job instability, this is the subgroup most likely to capture such events. The effects of MFIP's financial incentives show a pattern similar to the pattern of effects for recent applicants who were divorced or separated at baseline.[67] For recent applicant families with prior earnings, MFIP's financial incentives decreased earnings more than they increased welfare income; the incentives increased harsh parenting and maternal depression, and children's homes were less likely to have cognitively stimulating items (such as a dictionary and radio) and were more likely to be unsafe. Although the sample sizes are small, the magnitude of these effects was not found for recent applicants who did not have any prior earnings. The children of recent applicants who had prior earnings scored significantly lower on the PBS and were significantly less engaged in school.

In summary, despite small sample sizes and less compelling differences in effects on child outcomes, Tables 5.7 and 5.8 provide some weak evidence that MFIP's financial incentives may have detrimentally affected recent applicants by prolonging welfare assistance for families who had recently experienced a crisis.

Conclusions. In contrast to its beneficial effects on children of long-term recipients, MFIP generally had no impact on children of recent applicants. MFIP's financial incentives produced different effects on employment and income for recent applicants and for long-term recipients. These impacts, in turn, may have differently affected parenting and other aspects of children's lives. In particular, MFIP's financial incentives detrimentally affected the academic functioning of recent applicants' children. These children experienced poorer home environments, both physically and in terms of the quality of parenting, compared with children in AFDC families. Some of the detrimental effects of MFIP's financial incentives were more pronounced for the subgroup of recent applicants who were divorced or separated at baseline and for the subgroup who had annual earnings prior to random assignment. One hypothesis to explain these effects is that MFIP's financial incentives prolonged welfare assistance yet provided little assistance in finding work to a group of single mothers who were not accustomed to being on welfare and were eager to work. Again, however, the impacts of MFIP's financial incentives must be interpreted with caution. The evidence in support of this hypothesis is somewhat weak, given the small sample sizes and the imprecision of the impact estimates for the Incentives Only group.

[67]Note that these two subgroups are not mutually exclusive.

Table 5.8

The Impacts of MFIP's Financial Incentives on Selected Family and Child Outcomes for Recent Applicants, by Earnings History

Outcome	Had Prior Annual Earnings: MFIP Incentives Only	Had Prior Annual Earnings: AFDC	Had Prior Annual Earnings: Impact (Difference)	Did Not Have Prior Annual Earnings: MFIP Incentives Only	Did Not Have Prior Annual Earnings: AFDC	Did Not Have Prior Annual Earnings: Impact (Difference)	P-values for Variation of Impacts Across Subgroups
Direct Outcomes							
Average quarterly employment (%)	85.4	81.1	4.2	50.8	53.9	-3.1	0.43
Average annual earnings ($)	7,306	8,864	-1,558	3,693	4,525	-832	0.65
Average annual welfare benefit ($)	4,477	3,386	1,091 ***	5,841	4,398	1,443 **	0.62
Average annual income ($)	11,783	12,250	-467	9,534	8,924	610	0.46
Intermediate Outcomes							
Currently cohabiting (%)	18.0	13.9	4.2	21.9	5.8	16.2 ***	0.12
Maternal depression scale	17.2	12.9	4.4 ***	15.4	16.8	-1.3	0.04 **
At risk of clinical depression (%)	22.2	17.9	4.3	22.6	25.3	-2.7	0.52
HOME scale	78.2	78.8	-0.5	78.5	78.8	-0.3	0.92
Aggravation scale	1.8	1.7	0.1	1.8	1.8	0.1	0.78
Harsh-parenting scale	1.7	1.5	0.2 **	1.7	1.6	0.1	0.45
Frequency of harsh parenting	2.4	2.1	0.3 *	2.4	2.2	0.2	0.70
Supervision scale	4.6	4.7	-0.1	4.6	4.6	0.0	0.62
Child Outcomes							
Behavioral Problems Index	10.5	9.8	0.7	10.3	9.7	0.6	0.95
Positive Behavior Scale	193.0	201.6	-8.6 *	204.3	196.9	7.4	0.08 *
Performance in school	4.2	4.3	-0.1	4.0	4.3	-0.3	0.53
Engagement in school	10.0	10.5	-0.5 *	10.0	10.4	-0.3	0.78
Ever repeated a grade (%)	7.7	5.9	1.8	1.5	3.2	-1.7	0.35
Sample size (total = 517)	162	170		96	89		

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

Chapter 6

The Policy Implications of MFIP

This chapter places the Minnesota Family Investment Program's impacts on children and family well-being into a broader policy context. Section I begins by discussing MFIP's impacts on child outcomes in terms of effect sizes, which express impacts in standard deviations rather than in their original units. MFIP's effect sizes and a review of the empirical literature that links young children's outcomes with their future well-being are used as a guide in determining whether or not MFIP's impacts are of social importance. Section II compares the outcomes for control group children in this sample with outcomes for children in Minnesota and nationwide. To some extent, this section addresses whether or not the MFIP findings on children can be generalized; that is, if other populations of poor children fare similarly to children in the MFIP study, then an MFIP-type intervention may result in similar beneficial effects on child outcomes. Section III extends the discussion of MFIP's impacts on measures of family outcomes (depression, domestic abuse, and marriage) that are policy relevant independent of their implications on the well-being of children. The chapter ends with a brief discussion about lessons from MFIP that may inform future welfare and employment policies.

I. The Magnitude and "Importance" of MFIP's Impacts on Child Outcomes

As briefly discussed in Chapter 2, because most can relate to and understand a "dollar," it is quite straightforward to evaluate whether or not a $1,000 increase in income is large and whether or not it is policy relevant. Less clear, however, is the policy relevance of a 2-point change in a scale measuring children's behavioral problems or a 1-point change in average school performance. One reasonable and pragmatic approach to standardizing the child outcome measures to be in equivalent units is to convert these impact estimates into *effect sizes*, that is, to divide each impact by the standard deviation of the outcome for the control group. The magnitude of MFIP's impacts on child outcomes can then be assessed relative to each other as well as relative to other comparable intervention studies. Though effects sizes of 0.1, 0.3, and 0.5 can be considered small, medium, and large in nonexperimental studies (for example, see Lipsey, 1990), a review of experimental evaluations that are similar to MFIP, and therefore more relevant here, suggests that effect sizes on child outcomes of 0.1, 0.2, and 0.3 are small, medium, and large, respectively.

Table 6.1 presents MFIP's impacts and effect sizes on child outcomes for children of long-term recipients and recent applicants.[68] The effect sizes of MFIP's significant impacts on measures of child behavior and academic functioning for children of long-term recipients range from 0.1 to 0.2. Related to intervention studies comparable to MFIP, these effect sizes are small to medium in magnitude. Note that the effect sizes of MFIP's financial incentives' impacts on

[68]Appendix F presents MFIP's impacts and effect sizes on selected direct outcomes, such as employment; and intermediate outcomes, such as child care; and child outcomes.

Table 6.1

Summary of MFIP's Impacts on Maternal Reports of Child Outcomes in Urban Counties, by Welfare Status

	Long-Term Recipients			Recent Applicants		
Outcome	AFDC Outcome	Impact of MFIP	Effect Size	AFDC Outcome	Impact of MFIP	Effect Size
Behavioral Problems Index	12.7	-1.5 *	0.14	9.8	1.0	0.13
Externalizing subscore	6.0	-0.9 **	0.17	4.4	0.5	0.15
Internalizing subscore	4.5	-0.3	0.09	3.9	0.2	0.06
Positive Behavior Scale	193.7	0.5	0.01	200.0	-3.2	0.10
Contacted by school about child's behavioral problems at school? (%)	34.6	-4.7	0.10	24.7	-2.2	0.05
Child's health rated by mother as very good or excellent (%)	77.8	-2.8	0.07	78.7	-1.4	0.04
Any child have accident/injury that required an emergency room visit? (%)	36.9	7.1 *	0.15	43.5	1.4	0.03
Performance in school	4.0	0.2 *	0.15	4.3	-0.1	0.11
Engagement in school	9.9	0.3 **	0.17	10.4	-0.2	0.13
Ever repeated a grade (%)	3.6	1.8	0.10	4.6	-2.6	0.13
Sample size (total = 1,104)	281			259		

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Effect size is calculated as the impact divided by the standard deviation of the outcome for the control group.

Sample sizes may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

child outcomes for children of long-term recipients are similar. However, the effect sizes of MFIP's financial incentives impacts on child outcomes for children of recent applicants are larger (see Appendix F).

Are the magnitudes of effect sizes shown in Table 6.1 important? In general, these effect sizes are modest but do approach a magnitude that may have important implications for the future well-being of these children. One weakness of assessing the importance of an impact based on effect size is that equal weight is given to each impact across all measures of child outcomes. It is possible, for example, that a "small" effect on measured behavioral problems will have a greater impact on the future well-being of a particular child than a "large" effect on that child's school performance. The little empirical research that explicitly links early child outcomes to future adult outcomes may be informative in determining which child outcomes are relatively more important for predicting the well-being of that child as an adult. Studies find that children's externalizing behavior problems (that is, conduct problems, antisocial behavior, and hyperactivity) are highly correlated with adolescent unemployment, academic achievement, and conduct problems (for example, see Caspi et al., 1998; Masten et al., 1995). Furthermore, these same studies suggest that children's externalizing behavior is more predictive of adolescent well-being than is their social competence, health, or academic achievement. Based on this literature, MFIP's effects on children's problem behavior, particularly externalizing behavior, may be of substantial importance, particularly for a population of children who may be most at risk of poor future outcomes.

The ideal method of evaluating the social significance of MFIP's effects on child outcomes is to actually follow these children over a long period of time and then assess whether or not there is any relationship between their early child outcomes and their later well-being. This type of long-term follow-up is being conducted on children in Milwaukee's New Hope Project, in the National Evaluation of Welfare-to-Work Strategies (NEWWS), and in the Canadian Self-Sufficiency Project (SSP).

In summary, MFIP's effects on child outcomes were modest. Yet some of these modest effects — particularly reductions in problem behavior — may have important implications for the future well-being of these children in terms of adolescent school achievement and high-risk behavior. These results, in turn, may have important implications for their future completed education and labor force participation. The effects on direct measures of child outcomes must be considered together with other important indicators of children's well-being. For example, MFIP's reduction in child poverty may have widespread effects on children's future well-being that are not easily understood or evaluated in this study.

II. Comparisons of Control Group Children with State and National Samples

How closely does the MFIP child study sample depict the lives and outcomes of children in other poor or welfare populations or even the lives and outcomes of a representative sample of children in Minnesota? How likely is it that the results of this study might be generalized to a broader population? This section presents a descriptive snapshot of the children of AFDC recent applicants and long-term recipients in the MFIP child study and compares them with poor children and all children in Minnesota and the United States. More specifically, using available on-line information from the National Survey of

America's Families (NSAF), the section presents outcomes for Minnesota and national populations of families in general and of families whose incomes are less than 200 percent of the poverty level.[69]

The 1997 NSAF provides information about the economic, health, and social characteristics of children and their families in 13 states, including Minnesota, and of smaller samples from the balance of the states. These data include selective outcomes that can be constructed to be similar to outcomes used in this MFIP child study.[70] Outcomes were created to be comparable with the NSAF data. The first two are measures of child outcomes: the proportion of children with high levels of behavioral and emotional problems and the proportion of children highly engaged in school. The second two are measures of the proportion of children covered by public and private health insurance, respectively. The fifth outcome measures the proportion of children engaged in extracurricular activities. These five NSAF outcomes are relevant for children age 6 to 11. The sixth outcome is the only one in common that measures parenting: the proportion of children with a parent who felt highly aggravated. It is important to note that the NSAF outcomes are presented for children in single- and two-parent families and that the MFIP study outcomes are presented for children of single parents in urban counties. Details about the construction of these variables are given in the following table's footnotes.

Table 6.2 presents the descriptive statistics comparing outcomes in this MFIP study sample (urban counties) and outcomes in the NSAF sample. Nearly 15 percent of children age 5 to 12 of AFDC long-term recipients and 5 percent of children of AFDC recent applicants in this MFIP study had high levels of behavioral and emotional problems. Similar percentages of poor children age 6 to 11 in Minnesota and nationwide had high levels of such problems, but much smaller proportions (6 to 7 percent) of all children in Minnesota and nationwide had high levels. Almost 43 percent of children age 5 to 12 of AFDC long-term recipients and 56 percent of children of AFDC recent applicants in this MFIP study were highly engaged in school. In contrast, only about 40 percent of children age 6 to 11 in the poor and total populations of Minnesota and the United States were highly engaged in school. On somewhat comparable measures of child and family well-being, children in the MFIP study seem to have done as well as, if not better than, low-income children in Minnesota and nationwide, and on many measures their outcomes were comparable to representative samples of all children in Minnesota and the United States.

Compared with poor children and with representative samples of children in Minnesota and nationwide, children of AFDC long-term recipients and of recent applicants in this MFIP study were more likely to be covered by public health insurance, less likely to be covered by private health insurance, and less likely to engage in extracurricular activities. Fewer of them lived with a parent who felt highly aggravated, compared with poor children and with all children in Minnesota and the United States. However, the children of AFDC long-term recipients in this MFIP study

[69]These comparison populations were chosen because the information was readily available on-line as of March 2000.

[70]The comparability of items in this child study and the NSAF is not accidental; it was facilitated by Child Trends, which played a role in identifying measures to be included in surveys for both the Project on State-Level Child Outcomes and the NSAF.

Table 6.2

Selected Characteristics of Long-Term Recipients and Recent Applicants in the MFIP Study and of Families in the National Survey of America's Families

Outcome (%)	AFDC Long-Term Recipients	AFDC Recent Applicants	NSAF, Less Than 200% of Poverty		NSAF, All Incomes	
			Minnesota	United States	Minnesota	United States
Children with high levels of behavioral and emotional problems[a]	14.5	4.8	10.2	9.6	6.8	6.5
Children highly engaged in school[b]	43.1	55.9	37.9	38.2	41.2	43.3
Children covered by public health insurance	67.6	43.2	40.6	39.0	14.5	19.5
Children covered by private health insurance	23.9	42.2	46.8	39.7	80.0	68.6
Children who participated in extracurricular activities	53.9	57.9	72.1	72.5	85.6	82.7
Children living with a parent who felt highly aggravated[c]	7.0	3.4	11.8	13.7	6.6	9.0

SOURCES: MDRC calculations using data from the 36-month client survey. Urban Institute calculations from "Snapshots of American Families," National Survey of America's Families, 1997; http://newfederalism.urban.org.

NOTES: The sample from the 36-month client survey includes members randomly assigned from April 1, 1994, to October 31, 1994, excluding the small percentage who were receiving or applying for only Food Stamps at random assignment.

[a]The NSAF collected six items for this variable with scores which range from 6 to 18, with 12 or less measuring "greater behavioral and emotional problems." These outcomes are for children aged 6 to 11. The equivalent measure using the MFIP 36-month survey data is created from five of the six NSAF items and ranges from 5 to 15, with 10 or less measuring "greater behavioral and emotional problems."

[b]The measure created with the NSAF ranges from 4 to 16, with 15 or greater indicating "highly engaged." These outcomes are for children aged 6 to 11. The measure created with the MFIP 36-month survey data ranges from 3 to 12, with 11 or greater meaning "highly engaged."

[c]This outcome is created from the sum of four items. The mother was asked if she felt the child is hard to care for, the child does things that bother her, she felt like she is giving up her life for her child, or she felt angry with her child. The range of the sum is 1 to 16. Being highly aggravated is defined as 11 or higher. These outcomes are for children aged 6 to 11. The equivalent measure using the MFIP 36-month survey data is created by subtracting the outcome "feeling less aggravated " from 100.

were slightly more likely to have lived with a parent who felt highly aggravated than were the sample of children of all incomes in Minnesota — 7.0 percent compared with 6.6 percent.

On a number of measures, then — including behavior, school engagement, and parenting — appears that the children in AFDC families in this MFIP study (in urban counties) fared about as well as, if not better than, poor and total populations of children in Minnesota and nationwide. These descriptive statistics also suggest that findings in this MFIP study of child outcomes may generalize to broader populations of poor families, assuming that any such intervention generates similar patterns of employment behavior for single mothers.

III. The Policy Relevance of MFIP's Effects on Depression, Domestic Abuse, and Marriage for Long-Term Recipients

Chapters 3 and 4 showed that MFIP, and especially its financial incentives, significantly decreased maternal depression and domestic abuse and increased marriage among long-term recipients who had children age 2 to 9 at random assignment. The discussion in these chapters focused primarily on the implications of these impacts for children's well-being. This section discusses the implications of reduced depression and domestic abuse and increased marriage for improving the lives of single mothers themselves, independent of their effects on children's well-being. Illustrative questions for further research are also highlighted.

Depression. Estimates based on national surveys suggest that the prevalence of mental health illness among the poor and welfare recipients range from 2 to 13 percent (see Olson and Pavetti, 1996). Estimates of mental health illness in state welfare studies are much higher, ranging from 20 to 40 percent. In this study, approximately 30 percent of the AFDC population reported symptoms that place them at high risk of clinical depression. Given these estimates, an 8 percentage point reduction in the risk of clinical depression, or a 26 percent decrease compared with the control group, seems important. Some studies have found that more depressed individuals and welfare recipients who have had a bout of depression are less likely to be employed (Danziger et al., 1999; Wells et al., 1998). Recent results from experimental welfare and employment programs suggest that depression does not affect program impacts on employment but may affect program impacts on earnings (Michalopolous and Schwartz, 2000). Thus, there is evidence, based on other studies, that services designed to help welfare recipients overcome depression may assist them in becoming self-sufficient.

Some illustrative questions for further research include: How do reductions in depression affect the employment behavior — job retention or employment stability — of welfare recipients? Do reductions in depression play a role in helping welfare recipients achieve self-sufficiency? What is the link between depression and domestic abuse?

Domestic Abuse. MFIP significantly reduced the likelihood of long-term recipients' experiencing any type of domestic abuse, either from intimate partners or others. State and national estimates suggest that approximately 20 percent of the welfare population currently experiences domestic violence (for example, see Johnson and Meckstroth, 1998; Raphael and Tolman, 1997). Long-term recipients in

MFIP were nearly 10 percentage points less likely to report ever having been abused during the 36-month follow-up period — a 17 percent decrease from the control group.

These findings are policy relevant for a number of reasons. First, domestic abuse, like depression, is directly harmful to single mothers; any public policy that reduces the incidence of domestic abuse merits attention. Second, domestically abused women suffer from other factors that contribute to their inability to enter employment and, more important, their inability to remain employed and self-sufficient. Some of these factors are indirect, such as the effects of abuse on their emotional and physical health and its relationship to drug or alcohol use, which subsequently interferes with employment. Other factors are direct, such as being prevented by an abusive partner from pursuing education, work, or training (Hershey and Pavetti, 1997; Raphael and Tolman, 1997). Third, the MFIP survey was one of the first to collect data about life circumstances and domestic abuse via the Audio-CASI interview method (described in Chapter 2). This mode of data collection was a success and should be used in future efforts to collect sensitive personal information, significantly contributing to the relatively small body of knowledge in these areas.

Some illustrative questions for further research include: How does domestic abuse affect welfare recipients' employment behavior? What relationships exist between the abuser and the abused, the type of abuse suffered, and being able to get or maintain a job? How did MFIP, and especially its financial incentives, decrease the incidence of domestic abuse?

Marriage. MFIP increased marriage among long-term recipients There is little evidence to suggest that marriage was a vehicle either for exiting welfare or, in the case of MFIP, for avoiding the participation mandate. In addition, as examined in Volume 1, MFIP increased marriage among all single-parent long-term recipients and increased marital stability among two-parent long-term recipient families (Miller et al., 2000). Thus, MFIP's streamlined eligibility for two-parent families may play some part in encouraging marriage.

Chapter 4 hypothesized that the increased income and other aspects of MFIP's financial incentives encouraged long-term recipients to formalize current relationships or generate new relationships. A qualitative study of 300 low-income women in Charleston, Chicago, and Camden provides some evidence regarding why greater income or greater economic stability may have increased marriage and improved the well-being of single mothers (Edin, 1999). Interviewed women expressed concern about losing control over family finances because "men take over the money." In addition, "white mothers were often shocked by how vulnerable their withdrawal from the labor market had made them. It was after learning these hard lessons that most white mothers developed the conviction that is was foolish to marry unless they had 'established themselves' first" (pp. 18-19). For these women, economic independence increased their bargaining power in the household. Having more leverage within the family, and greater security should the marriage dissolve, makes marriage more appealing to them. Two benefits of marriage that likely became more apparent to these mothers are the reduced financial responsibility for fulfilling their family's basic needs and the opportunity to share parenting and household activities.

Some illustrative questions for further research include: How did MFIP increase marriage and marital stability? Did MFIP's effects on marriage vary by different characteristics of the family, such as

race/ethnicity, the number of children, and the ages of parents and children? What relationships exist among income, employment, and marriage?

IV. Lessons from MFIP About Welfare Reform

The goals of the Minnesota Family Investment Program were to encourage work, reduce dependence on public assistance, and reduce poverty. Child poverty was among the issues of greatest concern that policymakers aimed to address through MFIP. The MFIP findings bolster the long-standing literature that has associated poverty with worse outcomes for children — by confirming, in a rigorous experiment, that incremental increases in income for working-poor parents bring short-term benefits to children. From the perspective of welfare and employment policy reforms, the MFIP findings suggest as well that policies to enhance employment should also aim to enhance income, because MFIP's income increases were crucial in improving multiple aspects of family and child well-being. It is important to remember, however, that the strength of MFIP's results depends on the applicability and validity of mothers' reports about their own and their children's well-being; furthermore, the well-being of infants, toddlers, and adolescents has not been adequately assessed. Nonetheless, these findings should be incorporated into policymakers' understanding of the effects of welfare reform, income, and employment on low-income children — along with information from other evaluations about the effects on children of other welfare and employment programs.

A number of policy lessons emerge from the MFIP study concerning children and families:

- **MFIP's approach — increasing employment while ensuring that income also increases — does not jeopardize family and child well-being. In fact, policies that combine financial incentives with participation requirements lead to beneficial effects for some groups of families.**

The full MFIP program generally had beneficial effects on families and children. According to maternal reports, children's problem behaviors were reduced, and their academic functioning improved. Mothers were more likely to marry and were less likely to experience domestic abuse. Based on these findings, increased employment and increased income do not have to come at the cost of jeopardizing the well-being of mothers and children.

- **Enhanced financial incentives are an important tool for increasing income and for improving the general well-being of families and children who are long-term welfare recipients. The importance and magnitude of improving family and child well-being must be weighed against the higher cost associated with offering financial incentives.**

MFIP added from about $1,700 to $2,300 per year to government costs per family (see Volume 1 [Miller et al., 2000]). Single-parent long-term recipients in the MFIP group were, on average, about $1,900 better off per year than their AFDC counterparts and also experienced a number of important nonfinancial improvements in their lives. The two largest sources of financial gains were increased welfare benefits and increased earnings and associated fringe benefits. Also important

were increased Medicaid payments for working families, increased EIC and Minnesota WFC payments, and increased child care payments.

Although MFIP was more costly than the typical work-first program, each dollar spent by taxpayers resulted in an equivalent gain to families as well as a set of nonfinancial gains that these dollar values do not capture. Allowing long-term welfare recipients to retain more of their welfare benefits as their earnings increase may be one effective tool for improving the general well-being of single mothers and their children. The impacts of MFIP's financial incentives on maternal depression, domestic abuse, and marriage are particularly noteworthy, not only because of their potential ripple effects on the well-being of children but also because of their independent effects in improving the lives of single mothers. MFIP's results generally indicate that increasing income for working-poor single-mother families is beneficial; the results also may provide some evidence about the benefits of providing similar supplements, such as the Earned Income Credit (EIC), to working families.

- **Financial incentives may have adverse effects for new applicants to public assistance or for families who rely on public assistance during a time of personal crisis.**

For single mothers who were new applicants to or short-term recipients of welfare, MFIP's financial incentives prolonged welfare assistance and encouraged work while providing little assistance in finding work. This had the results of increasing maternal depression, reducing the quality of parenting, and negatively affecting children's academic functioning. Many single mothers who have experienced a divorce or separation or a job loss rely on public assistance during a time of personal crisis. Although the results of the MFIP evaluation might suggest that it would be beneficial to require welfare recipients to participate in mandatory services soon after first receiving welfare, the study was not designed to test this approach.

- **The mandate to participate in employment-related services generally had neither harmful nor beneficial effects on children of long-term recipients.**

Although MFIP was not designed to test the sole effect of requiring participation in employment-related services, the effects of adding mandatory services to financial incentives were inferred by comparing the effects on the MFIP group with the effects on the Incentives Only group. It is noteworthy that the increased employment demands arising from MFIP's participation mandate — which were not accompanied by increased income — generally led to neither harmful nor beneficial effects on children.

- **The effects of MFIP may provide a starting point for predicting the likely effects of Minnesota's current statewide welfare program, MFIP-S.**

It seems reasonable to expect that the original MFIP and the new MFIP-S will produce roughly similar effects under similar circumstances, at least until the five-year time limit begins to directly affect the welfare caseload. At the same time, however, changes in the statewide version of the program should be taken into account when applying these results to the statewide program. Some of the major changes, such as the somewhat lower earnings threshold for leaving welfare, might reduce MFIP's income-enhancing effects, while other changes, such as the mandate to participate immediately, might increase MFIP's income-enhancing effects by moving people into employment more quickly.

Appendix A

Major Differences in Rules Under the AFDC System and MFIP

Table A.1

Major Differences in Rules for Financial Assistance, Administration of Benefits, and Employment and Training Programs Under the AFDC System and MFIP

Program Dimension	AFDC System[a]	MFIP
Eligibility		
Income requirements	AFDC and Food Stamps both had gross and net income requirements that households must have met in order to be eligible for benefits.	Net income requirement only.
Asset limits	AFDC asset limit of $1,000, with $1,500 exemption for one vehicle. Food Stamp asset limit of $2,000, with exemption for one vehicle with a value of up to $4,500.	Asset limit of $2,000, with exemption for vehicles with a combined equity value of up to $4,500.
Who was included in the assistance unit	Stepparents, relatives, and others living with the applicant family were not considered part of the household by AFDC, but their income may have been counted in determining Food Stamp eligibility and benefit levels.	Some individuals, such as stepparents and parents of minor parents, could decide whether to be included in the MFIP household. If they decided not to be, they were not eligible to receive Food Stamps separately. Other relatives were not included in determining eligibility or benefit levels, but may have received Food Stamps separately.
Work history requirements and work limits for two-parent families	To have been eligible for AFDC, one parent must either have been incapacitated or reported a recent work history, and worked less than 100 hours per month. Minnesota's Family General Assistance (FGA) program did not have these requirements.	No such requirements.
Financial assistance		
Grant calculation when a recipient has earned income	AFDC grant calculation excluded $120 and one-third of any remaining monthly earnings during the first 4 months of work; $120 during the next 8 months; $90 per month thereafter. Food Stamp grant calculation excluded 70 percent of net income. Net income included the AFDC grant but excluded 20 percent of gross earnings, a $131 standard deduction, and up to $207 of excess shelter expenses.[b]	If there was no earned income, the maximum grant equaled the combined value of AFDC and Food Stamps. If there was earned income, benefits equaled the maximum grant increased by 20 percent, minus net income. (net income excluded 38 percent of gross earnings) However, benefits could not exceed the maximum grant level.

(continued)

Table A.1 (continued)

Program Dimension	AFDC System[a]	MFIP
Child care assistance for working parents	Child care reimbursed up to $175 ($200 for children under age 2) as part of AFDC grant, with additional costs reimbursed separately up to county maximum rate.	Child care paid directly to child care provider, up to county maximum rate.
Transitional child care and Medicaid	AFDC transitional benefits were available for the first 12 months after a registrant left welfare for work. Sliding-fee child care was available subsequently.	Same as AFDC.
Penalty for noncompliance with required activities	Noncompliant parent was removed from grant.	Grant was reduced by 10 percent.
Administration of benefits[c]		
Number of public assistance programs	Three separate programs: AFDC, Food Stamps, and FGA.	One program consolidated and replaced AFDC, Food Stamps, and FGA.
Rules for use of Food Stamp benefits	Federal Food Stamp rules applied.	Food Stamps incorporated into MFIP cash grant without Food Stamp restrictions on purchases, unless Food Stamps requested by the recipient.
Employment and training programs[d]		
Mandatory activities		
Single-parent families	Mandatory orientation to STRIDE (Minnesota's JOBS program) for AFDC applicants in a STRIDE target group, except those with children under age 3.	Mandatory participation in MFIP employment and training services for single parents with no children under age 1, who had received welfare for more than 2 years.
Two-parent families	Mandatory orientation and participation in job search and the Community Work Experience Program by primary wage-earner. Second parent could volunteer for STRIDE.	Mandatory participation in MFIP employment and training services by one parent if family had received welfare for more than 6 months.

(continued)

Table A.1 (continued)

Program Dimension	AFDC System[a]	MFIP
Parents under age 20	Mandatory participation in an education activity for those who had not completed high school or earned a General Educational Development (GED) certificate.	Same as AFDC.
Target groups for voluntary activities	Those in the following target groups could volunteer for STRIDE: single parents who had received aid for 36 of the past 60 months; were custodial parents under age 24 without a high school diploma or the equivalent, or had limited work experience;[e] or were within 2 years of becoming ineligible for aid because the youngest child was age 16 or older.	After July 1995, MFIP sample members who had been receiving welfare for less than 24 months were allowed to volunteer for MFIP services. The number who could volunteer was capped at 10 percent of the MFIP caseload for each case management agency.
Support services	Child care, transportation, and work-related expenses were covered for STRIDE participants. Child care was not available for social services required to remove barriers to employment.	Child care, transportation, and work-related expenses were covered for MFIP employment and training participants. Child care was available for social services required to remove barriers to employment, such as attendance at chemical dependency counseling.

SOURCES: AFDC and MFIP planning documents and eligibility manuals.

NOTES: [a]The term "AFDC system" is used throughout this report to represent the range of programs MFIP was designed to replace, including not only AFDC but also Food Stamps; the Family General Assistance (FGA) program; and Minnesota's JOBS program, STRIDE. The rules shown above are primarily related to AFDC, except where otherwise noted.

[b]These calculation standards were in effect in 1994.

[c]For both AFDC and MFIP group members, Electronic Benefits Transfer was implemented for cash and Food Stamps during the evaluation period (in late 1994 in Hennepin, late 1997 in Anoka and Dakota, and mid-1998 in rural counties).

[d]Employment and training rules described for the "AFDC system" are the rules for AFDC recipients. They do not apply to those receiving only FGA or Food Stamps.

[e]Limited work experience is defined as fewer than 6 months of full-time employment within the past 12 months.

Appendix B

MFIP 36-Month Survey Response Analysis

This appendix assesses the extent to which the survey sample is representative of the total sample. It also examines the baseline comparability between research groups to ensure that impacts based on the survey sample are unbiased.

The discussion begins with a review of sample sizes and response rates for each of the research subgroups discussed in the report. Two tests determine the generalizability of the survey sample to the full sample. The first test compares the baseline characteristics of respondents and nonrespondents. The second compares four critical outcomes for respondents and the full sample using administrative records available for all sample members. Finally, to assess the validity of the impact estimates, the baseline characteristics of respondents from each of the research groups are compared to ensure that survey response decisions have not undermined the baseline equivalence of those groups.

I. Sample Sizes and Response Rates

As discussed in Chapter 2, the 36-month survey was administered to 2,639 women with children between the ages of 5 and 12. Of the 2,639 women in the *full sample*, 2,131 are *respondents*, and 508 are *nonrespondents*. This appendix assesses the extent of representativeness between the respondent sample and the full sample.[1]

Table B.1 shows the response rates for each of the research groups discussed in this report. Response rates are reasonably high for all of them — close to 80 percent for five of the six research groups. Response rates in this range for samples of this size support generalizations from survey responses to the full sample. They suggest that the survey has captured the experiences of enough people within each research group to offer a fair and accurate representation not only of those who responded but also of those who did not.

Response rates should also be similar across research groups, because comparisons between a representative sample of one group and a less representative sample of another may yield biased estimates of program impacts. Among the research groups compared in this evaluation, the only significant response differences are those between recent applicants of the AFDC group and the MFIP group. Recent applicants in the AFDC group were slightly less likely to respond (71.7 percent) than their counterparts in the MFIP group (77.4 percent). Section IV of this appendix discusses the implications of this difference for estimating program impacts.

II. A Comparison of Respondents and Nonrespondents

To assess whether respondents differ from nonrespondents, an indicator of survey response status was regressed on the following pre-random assignment demographic characteristics: incidence and duration of past public assistance receipt, current receipt status, age, county, race/ethnicity, employment status and work history, gender, marital status, education, number and age of children, quarter of random assignment, and amounts of earnings and assistance received in the prior year.

Table B.2 reports the overall significance of the relationship between the full set of baseline

[1] As explained in Chapter 2, additional sample criteria concerning the age and residence of the focal child further restricted the *report sample* to 1,900 of the original 2,131 respondents. Analyses not shown indicate that compared with report sample members, disqualified respondents had more or older children and were more likely to be employed in the year prior to random assignment. The difference with respect to the ages of the children is expected, given that most of the disqualified respondents had children outside the age range of 5-12.

characteristics and the probability of survey response. The F-statistic can be interpreted as an indication of whether the differences in baseline characteristics between respondents and nonrespondents are statistically significant. As expected, significant but modest differences were found between respondents and nonrespondents. These types of differences — between individuals who can be located and who agree to respond to the survey and those who cannot be located or do not respond — are common to survey research. For example, among long-term recipients, respondents had younger children than nonrespondents. They were more likely to have received assistance or to have been employed in the year prior to random assignment. Long-term recipients from the MFIP group were also slightly more likely to respond than members of the other research groups. Among recent applicants, those with recent employment or a longer history of welfare receipt were the most likely to respond. Although significant, variables included in the model explain less than 5 percent of the variation in individual response behavior for long-term recipients and for recent applicants.

III. Comparisons of Impacts for the Respondent Sample and the Full Sample

Although respondents differ from nonrespondents, the relatively high response rates suggest that findings for the survey sample can be generalized to the full sample. One way to examine this is to compare impacts for the respondent sample and the full sample using administrative records data available for all sample members. Table B.3 compares regression-adjusted impacts for the respondent sample and the full sample. If impacts are similar for both samples, it seems reasonable to trust that impacts measured using the survey data are also relevant to the full sample.

The impacts for the two groups are fairly consistent, suggesting that impacts for the survey sample often apply to the full sample. This is especially true of estimates judged statistically significant (p-value < 0.10) in either sample. All but two of the estimates judged statistically significant for the full sample are also significant for the survey sample. All but one of the estimates judged significant for the respondent sample are also significant for the full sample. Impacts are more consistent for long-term recipients than for recent applicants — which is expected, given the higher response rates among long-term recipients. The most consistent program impacts are those comparing the MFIP and AFDC groups. Although based on smaller samples, impacts using the MFIP Incentives Only group are fairly consistent, but less so than impacts using the MFIP group.

IV. Assessing the Comparability of the Research Groups Within the Survey Sample

To ensure that survey response decisions have not undermined the baseline equivalence among research groups, an indicator of research group status was regressed on the following prerandom assignment demographic characteristics: incidence and duration of past public assistance receipt, current receipt status, age, county, race/ethnicity, employment status and work history, gender, marital status, education, number and age of children, quarter of random assignment, and amounts of earnings and assistance received in the prior year. Table B.4 reports the F-statistics and associated p-values indicating the strength of baseline differences among members of different research groups. Among long-term recipients, the three research groups are quite similar in all pre-random assignment demographic characteristics. None of the F-statistics is statistically significant. Among recent applicants, MFIP and AFDC respondents are also comparable.

With a smaller sample of recent applicant respondents, comparisons involving the MFIP Incentives Only group do evidence significant but modest baseline differences. The pattern of coefficients is somewhat inconsistent in terms of indicating whether the Incentives Only group is more or less disadvantaged than the AFDC group. Most of the differences, although statistically significant, are small in magnitude. To control for these differences, all the impacts presented in this report were regression-adjusted. Covariates included in all impact models control for the following pre-random assignment differences: incidence and duration of past public assistance receipt, current receipt status, age, county, race/ethnicity, employment status and work history, gender, marital status, education, number and age of children, quarter of random assignment, and amounts of earnings and assistance received in the prior year.

Taken together, the assessments presented in this appendix indicate that the survey respondent sample is reliably representative of the full sample. Response rates are consistently high across research groups, and administrative records impacts available for all sample members evidence consistent employment, earnings, and public assistance outcomes for respondents and full sample members. Among those who responded to the survey, there are few significant differences by research group status. All impacts were regression-adjusted to control for any differences.

Table B.1

Survey Response Rates for Research Groups of the MFIP Child Sample

	MFIP	MFIP Incentives Only	AFDC
Single-parent, urban, long-term recipients	83.0	83.6	79.0
Single-parent, urban, recent applicants	77.4 *	77.3	71.7

Sample sizes	
Long-term recipients	
Respondents	965
Nonrespondents	214
Total	1,179
Recent applicants	
Respondents	715
Nonrespondents	238
Total	953

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a focal child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A t-test is applied to each difference in response rates between research groups. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

The only significant difference is that between the MFIP and AFDC groups.

Table B.2

Significance of the Relationship Between Baseline Characteristics and Survey Response

		F-Statistic	p-Value of F-Statistic
Long-term recipients		2.570	0.000 ***
Recent applicants		1.481	0.041 **
Sample sizes			
Long-term recipients			
Respondents	965		
Nonrespondents	214		
Recent applicants			
Respondents	715		
Nonrespondents	238		

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a focal child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

The F-statistic is taken from a regression of response status on a range of baseline characteristics.

Table B.3

Comparison of Four Critical Impacts for the Full Sample and the Respondent Sample

Outcome	Fielded Sample: MFIP vs. AFDC	Fielded Sample: MFIP Incentives Only vs. AFDC	Fielded Sample: MFIP vs. MFIP Incentives Only	Respondent Sample: MFIP vs. AFDC	Respondent Sample: MFIP Incentives Only vs. AFDC	Respondent Sample: MFIP vs. MFIP Incentives Only
Long-term recipients						
Average quarterly employment rate (%)						
Adjusted impacts	14.3	8.8	5.6	15.0	9.7	5.3
p-value	0.000	0.001	0.027	0.000	0.000	0.050
Average annual earnings ($)						
Adjusted impacts	679	-55	734	654	199	455
p-value	0.050	0.876	0.035	0.082	0.601	0.220
Average quarterly receipt rate (%)						
Adjusted impacts	4.3	5.5	-1.2	3.6	3.4	0.3
p-value	0.013	0.002	0.484	0.038	0.058	0.871
Average annual benefit ($)						
Adjusted impacts	503	1,090	-588	513	1,023	-510
p-value	0.021	0.000	0.007	0.028	0.000	0.027
Recent applicants						
Average quarterly employment rate (%)						
Adjusted impacts	1.9	0.9	0.9	4.9	3.1	1.8
p-value	0.469	0.769	0.768	0.098	0.384	0.618
Average annual earnings ($)						
Adjusted impacts	-663	-1,144	481	-178	-643	466
p-value	0.153	0.045	0.399	0.749	0.340	0.486
Average quarterly receipt rate (%)						
Adjusted impacts	5.7	7.3	-1.7	6.0	6.4	-0.5
p-value	0.025	0.018	0.585	0.033	0.059	0.895
Average annual benefit ($)						
Adjusted impacts	825	1,178	-352	821	1,062	-241
p-value	0.000	0.000	0.205	0.002	0.001	0.444

(continued)

Table B.3 (continued)

Sample Sizes	Fielded Sample	Respondent Sample
Long-term recipients		
MFIP	400	332
MFIP Incentives Only	389	325
AFDC	390	308
Recent applicants		
MFIP	371	287
MFIP Incentives Only	194	150
AFDC	388	278

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records, public assistance benefit records, and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a focal child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

Sample size may slightly vary for each outcome variable.

Table B.4

Baseline Differences Among Respondents, by Research Group

	MFIP vs. AFDC	MFIP Incentives Only vs. AFDC	MFIP vs. MFIP Incentives Only
Long-term recipients			
F-statistic	1.017	0.827	0.862
P-value of F-statistic	0.443	0.735	0.684
Recent applicants			
F-statistic	0.932	1.426	1.269
P-value of F-statistic	0.566	0.080 *	0.169
Sample Sizes			
Long-term recipients			
MFIP	332		
MFIP Incentives Only	325		
AFDC	308		
Recent applicants			
MFIP	287		
MFIP Incentives Only	150		
AFDC	278		

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a focal child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

The F-statistic is taken from a regression of research group status on a range of baseline characteristics.

Appendix C

Details About the Construction of Child and Family Outcomes

This appendix provides a detailed description of the construction of the outcomes analyzed throughout this report. It includes brief descriptions of what the outcome measures are, the exact coding of each outcome, and in the case of scales, the psychometric information.

Items used to construct outcomes came from two sources, the child survey and the core survey. Most outcomes are constructed for the focal child and are based on the responses of the mother. Several outcomes (such as skipping meals, health insurance coverage, safety of the neighborhood, and emergency room visits) are constructed for all children in the family. Many sections of the child survey were administered by the Audio-Computer Assisted Self-Interview (Audio-CASI) method, wherein the respondent listened to the question over headphones and then responded via a computer (Gallup-Black, 1999). Prior to starting these sections of the survey, respondents were given a practice test to acclimate themselves with the process. As discussed in Chapter 2, a portion of the sample did not complete the Audio-CASI sections; those items are denoted below by an asterisk (*). Possible ranges for each outcome are referred to in the text of this appendix. Table C.5, at the end of this appendix, presents the actual ranges of continuous outcomes.

Some outcomes in this study were specifically constructed to be comparable with the studies in the Project on State-Level Child Outcomes. These "comparable" outcomes are noted in the text of this appendix and in the tables.

I. Economic Resources

A. Material Hardship

Financial Strain. A scale was created to evaluate financial strain from four items, including "My financial situation is better than it's been in a long time" and "I worry about having enough money in the future." Scales were computed only for those observations having three or more of the total items in the scale.

Respondents answered on a 4-point scale where 1 is equal to "strongly agree," 2 is equal to "agree somewhat," 3 is equal to "disagree somewhat," and 4 is equal to "strongly disagree." The outcome constructed is the mean of the four items, where a higher score indicates greater financial security. To make the scale consistent, two items were reverse-coded. The Cronbach coefficient alpha for this scale is .69.

Material Hardship. A scale was created to evaluate material hardship from seven items, including the ability to pay rent and electricity bills, being evicted, having telephone service disconnected, and needing to visit a doctor or dentist but being unable to do so in the past 12 months. The scale was computed only for those observations missing less than 25 percent of the total items in the scale. If the scale had at least 75 percent of the items, imputed means were used for the missing values.

The items equal 0 for "no" and 1 for "yes." The outcome constructed is the sum of the seven items, where a higher score indicates greater material hardship. The Cronbach coefficient alpha for this scale is .62.

Home Ownership. An outcome, created from the following item, captures the percentage of respondents who owned their own home.

Do you own your home?

Public Housing. An outcome, created from the following item, captures the percentage of those respondents who lived in public or subsidized housing.

Do you live in public housing, that is, housing owned or operated by a local housing authority or other government agency?

Other Housing. An outcome was created capturing the percentage of respondents who neither owned their own home nor lived in subsidized housing, if the respondent answered "no" to home ownership and to living in public housing.

B. Food Security

Having Enough to Eat. An outcome, created from the following item, captures the percentage of families who had enough to eat in the last month.

Which of these statements best described the food eaten in the prior month?

Respondents answered on a 4-point scale where 1 is equal to "enough of the kinds of food we want," 2 is equal to "enough but not always the kinds of food we want to eat," 3 is equal to "sometimes not enough to eat," and 4 is equal to "often not enough to eat." A response of 1 or 2 was coded as 100; otherwise, the response was coded as 0.

Skipping Meals. An outcome — created from the item above describing food eaten in the prior month and from the following item — captures the percentage of families in which the children were forced to skip a meal because there was not enough money for food.

In the prior month, did your children ever skip a meal because there wasn't enough money for food?

The item equals 1 if "yes" and 2 if "no."

A response of 1 to this item was coded "100." A response of 2 to this item or a response of 1 or 2 to food eaten in the prior month was coded "0."

C. Health Insurance

No Health Insurance. An outcome, created from the following item, captures the percentage of children who were covered by health insurance at all times since random assignment.

Since random assignment, have there been any periods of time when a child of yours living in this household did not have medical coverage, including Medicaid or MinnCare?

Medicaid. An outcome was created based on the following two items that captures the percentage of households in which children were covered by Medicaid or MinnCare.

In the prior month, were you or your children covered by Medicaid or MinnCare, or enrolled in an HMO paid for you by Medicaid?

The item equals 1 if answered "yes" and 2 if answered "no."

Who was covered in the prior month?

The item is answered "yes" or "no" for respondent, spouse/partner, and children.

Children are considered to be covered if the first item equals 1 and the second item is answered "yes" for children.

Private Insurance. An outcome was created based on the following two items that captures the percentage of households in which children were covered by private insurance.

In the prior month, were you or your children covered by health insurance other than Medicaid or MinnCare, such as private insurance, an employer-paid plan, or a private HMO?

The item equals 1 if answered "yes" and 2 if answered "no."

Who was covered by other health insurance?

The item is answered "yes" or "no" for respondent, spouse/partner, and children.

Children are considered to be covered if the first item equals 1 and the second item is answered "yes" for children.

II. Child Care

A. Types of Child Care

All respondents were asked about different types of child care used for any reason at least once a week for a month or more since random assignment. Four outcomes were created based on this item.

Informal Child Care. An outcome was created to capture the percentage of children who were in informal child care, which includes care by the child's father, the child's siblings, the child's grandparents, any other relative, the spouse or partner of the mother, or a baby-sitter not related to the child.

Formal Child Care. An outcome was created to capture the percentage of children who were in formal child care, which includes care in a daycare or group center; a summer daycare or summer sleep-away camp or summer-school classes; an extended daycare program sponsored by a school, church, or other organization; or boys' or girls' clubs, the YMCA/YWCA, and lessons or activities.

Never Used Formal/Informal Child Care. An outcome was created capturing the percentage of those respondents who never used formal or informal child care. These respondents skipped the rest of the child care section of the survey; thus, they did not answer the

questions pertaining to the child care calendar, hours that the child spent in care in the last week, and the quality of the primary child care arrangement.

Self-Care. An outcome was created for those respondents who answered that their children took care of themselves (self-care).

Note that formal care, informal care, and self-care are not mutually exclusive. That is, it is possible for a respondent to have used more than one type of care once a week for a month or more since random assignment, and the types of care used could have fallen into any of the categories. However, as noted above, if the only type of care used was self-care, the respondent skipped the rest of the child care section of the survey.

B. Out-of-School Activities

Extended Day Program. An outcome was created to capture the percentage of those who used an extended day program sponsored by a school, church, or other organization once a week for a month or more since random assignment.

Lesson, Clubs, or Activities. An outcome was created to capture the percentage of those whose children participated in a boys' or girls' club, the YMCA/YWCA, lessons, or activities once a week for a month or more since random assignment.

Extracurricular Activities. An outcome was created to capture the percentage of those whose children participated in extracurricular activities since random assignment, based on a "yes" answer about the focal child to any of the following three items.

Are any of your children on a sports team either in or out of school?

Do any of your children take lessons after school or on weekends in subjects like music, dance, language, or computers?

Do any of your children participate in any clubs or organizations after school, or on weekends, such as scouts, a religious group, or a girls' or boys' club?

C. Child Care in Week Prior to Interview

Respondents were asked about the type of child care used during the last full week prior to the interview and the number of hours the child spent in care during the last full week. Four outcomes were created based on this information.

Primary Care in Last Week Was Formal Care. An outcome was created to capture the percentage of those who used formal care the week prior to the interview.

Primary Care in Last Week Was Informal Care. An outcome was created to capture the percentage of those who used informal care the week prior to the interview.

Total Hours in Child Care Last Week. The total hours the child spent in any type of formal and informal care were counted.

Total Hours in Self-Care Last Week. The total hours the child spent in self-care were counted.

D. Child Care Quality

Quality of Primary Child Care. The Emlen scale measures the parent's perception of the quality of the child's primary care provider during the week prior to the interview. The 12-item scale includes items like "Child feels safe and secure with provider," "Child is treated with respect by provider," "Provider is warm and affectionate towards child," and "Provider handles discipline matters easily without being harsh." Two subscales were also created measuring warmth (five items) and safety (three items). In addition, a subscale was created to be in common with the Project on State-Level Child Outcomes (three items). Scales were computed only for those observations missing none of the total items in a scale.

The items are coded on a 4-point scale where 1 is equal to "never," 2 is equal to "sometimes," 3 is equal to "often," and 4 is equal to "always." The outcomes constructed take the sum of the items and from this sum create indicators of perceptions of high or low quality. A score of 36 or above on the total scale, a score of 15 or above on the warmth scale, and scores of 9 or above on the safety scale and the scale created for the Project on State-Level Child Outcomes is considered a perception of high-quality care. These outcomes are experimental; that is, they were created across all sample members, including those who never used care or used only self-care. Cronbach coefficient alphas for the scales are .90 for the total scale, .83 for the warmth scale, and .79 for the safety scale. The alpha for the scale created for the Project on State-Level Child Outcomes is .61.

E. Extent of Child Care

Respondents were given a child care calendar on which they recorded the type of child care used in each of the 36 months since random assignment. Three outcomes were created based on this information.

Months in Formal Child Care.[*] The total number of months in formal child care was counted; formal care is defined as above.

Months in Informal Child Care.* The total number of months in informal child care was counted; informal care is defined as above.

Months with One Child Care Arrangement.* The total number of months in which only one child care arrangement was used was counted; the arrangements were either formal or informal as defined above.

[*] As noted earlier, an asterisk signals and outcome that was measured by the Audio-CASI method, and a portion of the sample did not complete those sections of the survey.

F. Child Care Stability

Some respondents who gave answers for types of care used at least once a week for a month or more did not fill out the calendar. The next two outcomes are based on the answers of those who filled out the calendar.

Any Child Care. An outcome was created to capture the percentage of those whose children were in formal or informal care.

Any Formal Child Care. An outcome was created to capture the percentage of those whose children were in formal care.

Child care spell duration outcomes were created using the child care calendar. These outcomes are experimental; that is, they were created across all sample members, including those who never used formal or informal care.

Informal Child Care Spell. Two outcomes were created to capture the percentages of children whose first use of informal care lasted less than 12 consecutive months or more than 12 consecutive months, given that the care was started within a year of random assignment.

Formal Child Care Spell. Two outcomes were created to capture the percentages of children whose first use of formal care lasted less than 12 consecutive months or more than 12 consecutive months, given that the care was started within a year of random assignment.

III. Family Environment

Home Environment. A scale was created from items adapted from the Home Observation for Measurement of the Environment (HOME) scale (Caldwell and Bradley, 1984). The scale used in this report resembles a modified version of the HOME scale, called the HOME-Short Form (HOME-SF), that was created in the National Longitudinal Survey of Youth (NLSY; Baker et al., 1993). The New Chance Demonstration used a trichotomous coding scheme, which MFIP followed (Polit, 1996). In addition to the total HOME scale, three subscales were created to depict the child's cognitive stimulation, routine behavior, and physical environment. (The routine behavior subscale was not used in the New Chance Demonstration or the NLSY.)

Table C.1 presents all the items in the HOME scale as well as the factors for the three subscales. Two scales, including a routine behavior scale, were also created to be in common with outcomes in the Project on State-Level Child Outcomes. The total scale was computed only for those observations missing less than 31 percent of the total items in the scale. (Items that were based on interviewers' assessments were more likely to be incomplete than other items, because some interviews took place over the phone. To maximize the sample size in this case, the threshold for missing items was increased. Nonetheless, using either 31 or 25 percent yielded similar results.) If the scale had at least 69 percent of the items, imputed means were used for the missing values. For most of the subscales, the scales were computed only for those observations missing less than 25 percent of the total items in the scale. For those scales with at least 75 percent of the items, imputed means were used for the missing values. In the case of the physical environment subscale, the scale was computed only for those observations missing none of the items in the scale.

The thirty-three items on the HOME scale follow.

Think about your (child/children). How safe (is/are) your (child/children) when (he/she) (is/they are) outside during the daytime in your neighborhood?

This item was made into a 3-point scale where 1 is equal to "very unsafe or not allowed outside," 2 is equal to "somewhat unsafe," and 3 is equal to "very safe or somewhat safe."

Respondents were asked about activities the child performed at the same time each day, such as meals, homework, going to bed, bedtime activities, and playtime. These items were made into a 3-point scale where 1 is equal to "never," 2 is equal to "one to five days a week or does not apply," and 3 is equal to "every day."

About how many magazines does your family get regularly, either on the newsstand, by subscription, or from friends?

This item was made into a 3-point scale where 1 is equal to "none," 2 is equal to "one or two," and 3 is equal to "three or more."

How often does your family get a newspaper, either on the newsstand, by subscription, or from friends?

This item was made into a 3-point scale where 1 is equal to "never," 2 is equal to "once in a while," and 3 is equal to "most days or every day."

About how many hours is the TV on in your home each day?

This item was made into a 3-point scale where 1 is equal to "greater than 10 hours," 2 is equal to "between 5 and 10 hours," and 3 is equal to "between 0 and 5 hours or has no TV."

About how often do you read stories to child?

This item was made into a 3-point scale and is based on the age of the child. If the child is less than 6 years old, then 1 is equal to "several times month," "several times a year," or "never"; 2 is equal to "once a week" or "at least three times a week"; and 3 is equal to "every day." If the child is 6 years old or older, then 1 is equal to "several times a year" or "never"; 2 is equal to "several times a month" or "once a week"; and 3 is equal to "at least three times a week" or "every day."

How often do you and child go to the library? Do either you or child have a library card?

These two items are combined into one item and made into a 3-point scale where 1 is equal to "never go to library and do not have library card"; 2 is equal to "goes to library several times a year or never but parent or child owns a library card" or "goes to library several times a year but parent or child does not have a library card"; and 3 is equal to "goes to the library once a month, several times a month, or about once a week."

About how many books does CHILD have of (his/her) own?

This item was made into a 3-point scale where 1 is equal to "less than 10 books," 2 is equal to "between 10 and 20 books," and 3 is equal to "greater than 20 books."

Do you have a dictionary (here) at home? Does child ever use it?

These two items are combined into one item and made into a 3-point scale where 1 is equal to "does not have a dictionary," 2 is equal to "has a dictionary but child does not use it," and 3 is equal to "has a dictionary and child uses it."

About how often does CHILD read for enjoyment?

This item was made into a 3-point scale where 1 is equal to "several times a month, several times a year, or never"; 2 is equal to "several times a week"; and 3 is equal to "every day."

When CHILD watches TV with you or another adult in the household, are the TV programs discussed with CHILD?

This item was made into a 3-point scale where 1 is equal to "hardly ever," 2 is equal to "once in a while," and 3 is equal to "fairly often."

Is there a radio, tape recorder, or a CD player here that child can use? Is (he/she) allowed to use it whenever (he/she) wants to, without asking permission?

These two items are combined into one item and made into a 3-point scale where 1 is equal to "there is no radio, tape recorder, or CD player that child can use"; 2 is equal to "the child is not allowed to use the device whenever (he/she) wants"; and 3 is equal to "the child is allowed to use the device whenever (he/she) wants to, without asking permission."

Is there any kind of musical instrument — for example, a piano, drum, guitar, and so on — that CHILD can use here at home?

This item was made into a 2-point scale where 1 is equal to "no" and 3 is equal to "yes."

How often have you or another family member taken or arranged to take CHILD to any type of live musical program, play, or dance performance within the past year?

How often have you or another family member taken or arranged to take CHILD to any type of museum — children's scientific, art, historical, etc .— within the past year?

These items were made into a 3-point scale where 1 is equal to "never"; 2 is equal to "once or twice"; and 3 is equal to "several times, about once a month, or about once a week or more often."

Has CHILD taken a trip more than 50 miles away from home — for example, with a family member, church group, or youth organization — within the past year? How many trips did (he/she) take this past year?

These two items are combined into one item and made into a 3-point scale where 1 is equal to "child has not taken a trip," 2 is equal to "one trip," and 3 is equal to "more than one trip."

Do any of your children take lessons after school or on weekends in subjects like music, dance, language, or computers?

This item was made into a 2-point scale where 1 is equal to "no" and 3 is equal to "yes."

The following items capture the interviewer's assessment of the home environment.

The interviewer was asked yes/no questions about the interior of the house/apartment — such as whether it was clean, cluttered, or dark — as well as about the safeness of the exterior of the housing structure. These items were made into a 2-point scale where 1 is equal to "no" and 3 is equal to "yes."

How well kept is the exterior of the structure in which the respondent lives?

How well kept are the exteriors of other neighborhood structures?

These two items were made into a 3-point scale, based on an 11-point scale, ranging from 0 to 10, where "very poorly kept, dilapidated, major repairs needed" is at the low extreme; "needs minor painting or repair, but nothing major" is at the midrange; and "very well kept and in good repair" is at the high extreme. On the 3-point scale, 1 is equal to "0-5," 2 is equal to "6-8," and 3 is equal to "9-10."

Within one or two blocks of respondent's home, were there any of the following things?

Teenagers hanging out on the street.
Vacant lots.
Litter and garbage on the street or sidewalk.
Abandoned or boarded-up houses/buildings.
Vandalism such as broken windows or graffiti.
Foliage/landscaping (trees, grass, plantings).

These yes/no items were combined into one summary item that was made into a 3-point scale. The last item (foliage/landscaping) was reverse-coded. The summary item equals 1 if the interviewer answered "yes" to three or more of the items, 2 if the interviewer answered "yes" to one or two of the items, and 3 if the interviewer answered "no" to all items.

Was the atmosphere in the area where the interview took place . . . :

This item was made into a 3-point scale, based on an 11-point scale, ranging from 0 to 10, where "extremely chaotic and noisy, disruptive to interview" is at the low extreme; "some noise and interruptions, but not too disruptive to interview" is at the midrange; and "very quiet and calm, ideal for interview" is at the high extreme. On the 3-point scale, 1 is equal to "0-5," 2 is equal to "6-8," and 3 is equal to "9-10."

Please rate the respondent's personal hygiene . . . :

This item was made into a 3-point scale, based on an 11-point scale, ranging from 0 to 10, where "very great evidence of poor hygiene (matted hair, green or rotten teeth, filthy clothes or skin or odor)" is at the low extreme; "some evidence of poor hygiene (e.g., dirty clothes or face)" is at the midrange; and "no evidence of poor hygiene" is at the high extreme. On the 3-point scale, 1 is equal to "0-5," 2 is equal to "6-8," and 3 is equal to "9-10."

How many books are visible in respondent's apartment/house?

This item was made into a 3-point scale where 1 is equal to "none," 2 is equal to "1-9," and 3 is equal to "10 or more."

Are there pictures, posters, or art work on the walls of respondent's home?

This item was made into a 3-point scale where 1 is equal to "no, none"; 2 is equal to "yes, one"; and 3 is equal to "yes, two or more."

The outcomes constructed take the sum of the items, where a higher score indicates a home environment of higher quality. The Cronbach coefficient alphas for the scales are .77 for the total scale, .65 for the cognitive stimulation scale, .63 for the routine behavior scale, and .79 for the physical environment scale. The alphas for the scales created for the Project on State-Level Outcomes are .51 for the total scale and .60 for the routine behavior scale.

The New Chance Demonstration had separate scales dependent on the age of the focal child. The alphas for the report ranged from .70 to .76 at the 18-month point and from .81 to .82 at the 42-month point.

Safety of the Neighborhood. An outcome, created from the following item, captured the percentage of families who lived in a safe neighborhood.

How safe (is/are) your (child/children) when (he/she) (is/they are) outside during the daytime in your neighborhood?

Respondents answered on a 4-point scale where 1 is equal to "very safe," 2 is equal to "somewhat safe," 3 is equal to "somewhat unsafe," and 4 is equal to "very unsafe." A neighborhood is considered safe if the item is equal to 1 or 2.

Number of Family Moves. An outcome, based on the following item, captured the number of moves a family had made since random assignment.

How many times have you moved since random assignment?

IV. Family Functioning

A. Marital Status and Fertility

Three outcomes were created from the following four items.

1. Have you ever been married?

This item equals 1 if "yes" and 2 if "no."

2. In the prior month, were you . . . ?

This item equals 1 if "married and living with your husband," 2 if "separated or living apart from your husband," 3 if "divorced," and 4 if "widowed."

3. In the prior month, were you living as a couple with a boyfriend or partner?

This item equals 1 if "yes" and 2 if "no."

4. Where does the focal child's natural, birth father live?

This item equals 1 if "in your household"; 2 if "in your neighborhood nearby"; 3 if "in the same city but not nearby"; 4 if "in the same state, but not the same city"; 5 if "in a different state"; 6 if "in a different country"; 7 if "deceased"; 8 if "in a jail/prison"; 9 if "other."

Currently Married. An outcome was created capturing the percentage of respondents currently married. A respondent is considered married if the second item above equals 1. A respondent is not considered married if the first item equals 2 or if the second item is greater than 1.

Currently Married to Biological Father. An outcome was created capturing the percentage of respondents currently married to the biological father of the focal child. A respondent is considered married to the father if the second item above equals 1 and the fourth item equals 1. A respondent is not considered married to the father if the second item equals 1 and the fourth item is greater than 1 or if the first item equals 0 and the second item is greater than 1.

Currently Cohabiting. An outcome was created capturing the percentage of respondents currently cohabiting. A respondent is considered to be cohabiting if the third item above equals 1. A respondent is not considered to be cohabiting if the second item equals 1 or if the third item equals 2.

Currently Cohabiting with Biological Father. An outcome was created capturing the percentage of respondents currently cohabiting with the biological father of the focal child. A respondent is considered to be cohabiting with the father if the third item above equals 1 and the fourth item above equals 1. A respondent is not considered to be cohabiting with the father if the third item equals 1 and the fourth item is greater than 1 or if the third item equals 2.

Number of Children Since Random Assignment. This outcome, created from the following item, captures how many children the mother had had since random assignment.

How many children have you had since random assignment?

B. Maternal Domestic Abuse

Domestic abuse outcomes were constructed from three pieces of information: types of abuse, perpetrators, and timing of abuse.

1. Types of abuse

Did anyone ever yell at you all the time, put you down on purpose, or call you names in order to make you feel bad about yourself as a person?

Did anyone ever try to control your every move?

Did anyone ever threaten you with physical harm?

Did anyone ever force you into sexual activities?

Did anyone ever hit, slap, kick, or otherwise physically harm you?

The items equal 1 if "yes" and 2 if "no." If an item equaled 1, then the identity of perpetrators was probed.

2. Perpetrators

People who did these things: your husband, ex-husband, boyfriend, ex-boyfriend, female partner (current or past), parent or stepparent, other family member, someone at your job, a stranger, or someone else.

The item equals 1 if "yes" to a specific perpetrator and 2 if "no" to a specific perpetrator.

3. Timing of abuse

How long ago did the most recent event happen?

The item equals 1 if "within past 7 days," 2 if "a week ago," 3 if "a month ago," 4 if "six months ago," 5 if "a year ago," 6 if "more than a year ago," and 7 if "more than 3 years ago."

Abuse by an Intimate Partner in the Last Year.* Outcomes were created to capture the percentage of respondents who had been abused by an intimate partner in the last year. A respondent is defined to have been abused by an intimate partner in the last year if the first item equals 1; the second item equals 1 for husband, ex-husband, boyfriend, ex-boyfriend, or female partner; and the third item is less than or equal to 5.

Abuse by Other Person in the Last Year.* Outcomes were created to capture the percentage of respondents who had been abused by someone other than an intimate partner in the last year. A respondent is defined to have been abused by someone other than an intimate partner in the last year if the first item equals 1; the second item equals 1 for parent/stepparent, other family member, someone at your job, a stranger, or someone else; and the third item is less than or equal to 5.

Abuse in the Last Three Years.* An outcome was created to capture the percentage of respondents who had ever been abused in the last three years. A respondent is defined to have been abused in the last three years if the first item equals 1, the second item equals 1 for any choice, and the third item is less than or equal to 6.

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* As noted earlier, an asterisk signals an outcome that was measured by the Audio-CASI method, and a portion of the sample did not complete those sections of the survey.

C. Maternal Psychological Functioning

Depression.* The CES-D (Center for Epidemiological Studies-Depression) scale measures symptoms of maternal depression (Radloff, 1977). It is commonly used and validated for identifying people at risk for clinical depression. The 20-item scale covers areas such as appetite loss, shortened attention span, feeling sad or depressed, lack of hopefulness for the future, feeling fearful, sleeplessness, loneliness, crying spells, and lack of energy. The scale was computed only for those observations missing less than 25 percent of the total items in the scale. For those scales with at least 75 percent of the items, imputed means were used for the missing values.

Respondents answered on a 4-point scale where 0 is equal to "rarely or none of the time (<1 day)," 1 is equal to "some or little of the time (1-2 days)," 2 is equal to "occasionally or a moderate amount of time (3-4 days)," and 3 is equal to "most or all of the time (5-7 days)." To make the scale consistent, four items were reverse-coded. One outcome takes the sum of the 20 items, where a higher score indicates greater depression. In a second outcome, the respondent is considered at high risk for clinical depression if the sum of the scale is greater than 23. The Cronbach coefficient alpha for the scale is .91. The New Hope Demonstration also used the CES-D scale for respondent parents and reported an alpha of .90 (Bos et al., 1999).

D. Parenting Behavior

Parenting behavior is measured by four scales covering aggravation, warmth, harshness, and supervision. Although a total scale of the items in the four scales has not been constructed, a factor analysis was done on the items in the four scales. The items in each of the scales as well as the factors for each item can be found in Table C.2.

Aggravation.* A scale measuring aggravation was created from four items including "During the past month have you felt your child is much harder to care for than most?" and "During the past month have you felt your child does things that really bother you a lot?" The scale was computed only for those observations having three or more of the total items in the scale. If the scale was summed and had at least three items, imputed means were used for the missing values.

Respondents answered on a 4-point scale where 1 is equal to "none of the time," 2 is equal to "some of the time," 3 is equal to "most of the time," and 4 is equal to "all the time." Two outcomes were then constructed. One outcome takes the mean of the four items, where a higher score indicates greater aggravation. In a second outcome, the respondent is considered to have low aggravation if the sum of the four items is less than or equal to 11. The Cronbach coefficient alpha for this scale is .70.

Warmth.* A scale measuring warmth was created from three items covering the number of times the child was shown physical affection, was praised, and was bragged about over the past week. The scale was computed only for those observations missing none of the total items in the scale.

The items were made into a 4-point scale where 1 is equal to "0 times," 2 is equal to "1-5 times," 3 is equal to "6-19 times," and 4 is equal to " 20 or more times." The outcome

constructed takes the mean of the three items, where a higher score indicates greater warmth. The Cronbach coefficient alpha for this scale is .57.

Harshness.* A scale was created from the following three items covering the number of times the respondent spanked, yelled at or threatened, and lost her temper with the child over the past week. The scale was computed only for those observations missing none of the total items of the scale.

The items were made into a 4-point scale where 1 is equal to "0 times," 2 is equal to "1-3 times," 3 is equal to "4-6 times," and 4 is equal to "7 or more times." Two outcomes were then constructed. One outcome takes the mean of the three items, where a higher score indicates greater harshness. A second outcome takes the maximum of the items, thus better capturing harshness if it exists only in one item. The Cronbach coefficient alpha for this scale is .82.

Supervision.* A scale measuring parental supervision of the child was created from four items covering how often the respondent knew where the child was, whom the child was with, whether the child had come back home at the expected time, and whether the child had finished homework. The scale was computed only for those observations missing 25 percent or less of the total items in the scale.

Respondents answered on a 5-point scale where 1 is equal to "almost never," 2 is equal to "sometimes," 3 is equal to "often," 4 is equal to "almost always," and 5 is equal to "always." The outcome constructed takes the mean of the four items, where a higher score indicates greater supervision. The Cronbach coefficient alpha for this scale is .69.

Alternative outcomes were also constructed combining the warmth and the supervision outcomes. These alternative outcomes were based on the median of the warmth and supervision outcomes and included outcomes for permissive parenting, authoritarian parenting, neglectful parenting, and authoritative parenting. (These outcomes are noted when appropriate in the text of the report.)

Measures of dispersion were also constructed for the mean parenting outcomes. The 75th percentile and the 25th percentile were calculated based on the total sample control group. Two outcomes were then created per parenting outcome. For each parenting outcome, one outcome is equal to 100 if the parenting outcome is greater than the 75th percentile and is 0 otherwise. A second outcome is equal to 100 if the parenting outcome is less than the 25th percentile and is 0 otherwise.

V. Child Outcomes

All child outcomes — including measurements of behavior, health, and academic performance — are based solely on maternal reports.

A. Behavior

Problem Behavior.* Problem behavior was measured from the 28-item Behavioral Problems Index (BPI), which was used in the National Longitudinal Survey of Youth (NLSY; Peterson and Zill, 1986). In addition to the main scale, two subscales were created based on

externalizing behavior and internalizing behavior. Table C.3 presents all the items in the BPI as well as the factors for the two subscales. An externalizing behavior subscale and an internalizing behavior subscale were also created to be in common with outcomes in the Project on State-Level Child Outcomes. Scales were computed only for those observations missing less than 25 percent of the total items in the scale. For those scales with at least 75 percent of the items, imputed means were used for the missing values.

Respondents answered on a 3-point scale where 0 is equal to "not true," 1 is equal to "sometimes true," and 2 is equal to "often true." The outcomes constructed take the sum of the items, where a higher score indicates more negative behavior. The Cronbach coefficient alphas are .92 for the total scale, .87 for the externalizing scale, and .80 for the internalizing scale. Alphas for the two scales created for the Project on State-Level Child Outcomes are .73 for the externalizing scale and .73 for the internalizing scale.

In addition to the three scales, an outcome was created capturing the percentage of children with a high level of behavioral and emotional problems. The outcome was constructed from five items including "My child is rather high strung, tense, and nervous," "My child has difficulty concentrating and paying attention," "My child has trouble getting along with other children," "My child feels worthless or inferior," and "My child is unhappy, sad, or depressed."

The items were made into a 3-point scale where 1 is equal to "often true," 2 is equal to "sometimes true," and 3 is equal to "not true." The sum of the five items was taken for those observations missing less than 25 percent of the five items. For those observations with at least 75 percent of the five items, imputed means were used for the missing values. A score of 10 or less indicates a high level of behavioral and emotional problems.

Other studies have evaluated child behavior with the BPI. The New Hope Project had parents rate preschool-age and school-age children separately (Bos et al., 1999). For preschool-age children, the alpha for the total scale is .69 and ranges from .63 to .70 for the two subscales. For school-age children, the alpha for the total scale is .77 and ranges from .61 to .81 for the two subscales. The NLSY also reports alphas separately (Baker et al., 1993). For preschool-age children and school-age children, the alpha for the total scale is .88. The NLSY divided the BPI into six subscales, with alphas ranging from .57 to .71. Finally, the New Chance Demonstration also reports alphas separately (Quint, Bos, and Polit, 1997). For preschool-age children, the alpha for the total scale is .82; for school-age children, the alpha is .86. New Chance also divided the BPI into six subscales, with alphas ranging from .49 to .63.

Positive Behavior.* Positive behavior was measured from the 25-item Positive Behavior Scale (PBS; Polit, 1996). In addition to the main scale, three subscales were created based on compliance, social competence, and autonomy. Table C.4 presents all the items in the PBS as well as the factors for the subscales. A fourth subscale was also created to be in common with outcomes in the Project on State-Level Child Outcomes. Scales were computed only for those observations missing less than 25 percent of the total items in the scale. For those scales with at least 75 percent of the items, imputed means were used for the missing values.

Respondents answered on an 11-point scale ranging from 0, equal to "not at all like my child," to 10, equal to "completely like my child." The outcomes constructed take the sum of the items, where a higher score indicates more positive behavior. The Cronbach coefficient alphas are .95 for the total scale, .93 for the compliance scale, .85 for the social competence scale, and

.79 for the autonomy scale. The alpha for the scale created for the Project on State-Level Outcomes is .90.

The PBS was initially used in the New Chance Demonstration (Quint, Bos, and Polit, 1997). The PBS was created to emphasize the positive aspects in a child's behavior, as opposed to negative aspects, which the BPI captures (Polit, 1996). Alphas from this study are .94 for the total scale and range from .77 to .88 for the compliance, social competence, and autonomy subscales. A parent-rated PBS was also used by the New Hope Project (Bos et al., 1999), in which the alphas are .91 for the total scale and range from .71 to .86 for the subscales.

Correlation between the PBS and the BPI is -.70. Thus, the two scales are negatively correlated, as would be expected. Other studies confirm this correlation. In the New Chance Demonstration, the correlation is -.54 for the two scales; and in the New Hope Project, the correlation is -.33 for preschool-age children and -.55 for school-age children.

Measures of dispersion were also constructed for the PBS and BPI outcomes. The 75th percentile and the 25th percentile were calculated based on the total sample control group. Two outcomes were then created per PBS/BPI outcome. For each PBS/BPI outcome, one outcome is equal to 100 if the PBS/BPI outcome is greater than the 75th percentile and to 0 otherwise. A second outcome is equal to 100 if the PBS/BPI outcome is less than the 25th percentile and to 0 otherwise.

B. School Behavior

Behavioral Problems. The outcome, created from the following item, captures the percentage of respondents who had been contacted by the school about behavioral problems.

> *Since random assignment, have you been contacted by the school regarding any behavioral problems* your *child may have been having?*

Special Education. The outcome, created from the following item, captures the percentage of those respondents whose children had received special education.

> *Since random assignment, has your child received special education because of a physical, emotional, behavioral, or other problem that limited the kind or amount of school work (he/she) can do?*

C. Academic Functioning

Performance in School. Two outcomes were created from the following item.

> *Based on your knowledge of child's schoolwork, including (his/her) report cards, how has (he/she) been doing in school overall?*

One outcome was coded on a 5-point scale where 1 is equal to "not well at all," 2 is equal to "below average," 3 is equal to "average," 4 is equal to "well," and 5 is equal to "very well." A second outcome indicates those who performed below average and was coded 100 if the respondent answered that her child performed in school "not well at all" or "below average" and was coded 0 if the respondent answered that her child performed "average," "well," or "very well."

Engagement.[*] A scale measuring engagement was created from four items including "Does just enough homework to get by" and "Only works on schoolwork when forced to." The scale was computed only for those observations having three or more of the total items in the scale. For those scales with at least three items, imputed means were used for the missing values.

The items were coded on a 3-point scale where 1 is equal to "not true," 2 is equal to "sometimes true," and 3 is equal to "often true." To make the scale consistent, two items were reverse-coded. The outcome takes the sum of four items, where a higher score indicates greater engagement. The Cronbach coefficient alpha for this scale is .60.

Grade Repetition. An outcome, created from the following item, captures the percentage of children who had repeated a grade.

> *Since random assignment, has child repeated a grade — including kindergarten — for any reason?*

Suspension/Expulsion. An outcome, created from the following item, captures the percentage of children who had been suspended or expelled.

> *Since random assignment, has your child been suspended, excluded, or expelled from school?*

D. <u>Health</u>

Child's Health. The outcome, created from the following item, captures the percentage of children whose health was above average.

> *Would you say that child's health in general is . . .*

The item was coded 100 if the respondent answered "excellent" or "very good" and 0 if the respondent answered " good," "fair," or "poor."

Child Safety. The outcome, created from the following item, captures the percentage of children who had made an emergency room visit.

> *Since random assignment, have any of your children had an accident, injury, or poisoning requiring a visit to a hospital emergency room or clinic?*

[*] As noted earlier, an asterisk signals an outcome that was measured by the Audio-CASI method, and a portion of the sample did not complete those sections of the survey.

Table C.1

Items and Factor Loadings for HOME Subscales

Item in Total Scale	Cognitive Stimulation	Routine Behavior	Physical Environment
Number of hours the TV is on	0.40		
Owns a library card/frequency of library trips	0.42		
Number of books child owns[a]	0.48		
Is there a dictionary and does child use it?	0.57		
Are TV programs discussed with an adult?[a]	0.30		
Is there a radio, CD player, etc., that child can use?	0.36		
Is there a musical instrument that child can use?[a]	0.47		
Number of trips to musical, play, dance performance[a]	0.44		
Number of trips to a type of museum[a]	0.46		
Number of trips child has taken over 50 miles	0.43		
Does child take after-school or weekend lessons?	0.38		
How many books are visible in the home?	0.39		
How often is evening meal served at a regular time?[b]		0.60	
How often is homework completed at a regular time?		0.57	
How often do children go to bed at regular time?[b]		0.56	
How often do you do special things with children at bedtime?[b]		0.56	
How often does family eat breakfast at regular time?[b]		0.41	
How often do you do something fun with child?		0.51	
How often do you read stories to child?[a]		0.53	
Visible rooms of the home are cluttered[a]			0.63
Building has potentially dangerous hazards[a]			0.53
All visible rooms of home are reasonably clean[a]			0.65
Interior of the home is dark or monotonous[a]			0.56
How well kept is the exterior of the structure?			0.76
How well kept are the exterior of other structures?			0.71
Teens, litter, vandalism, etc., in neighborhood			0.45
Atmosphere in the interview area			0.49
Respondent's personal hygiene			0.60
Pictures, posters, art work on walls of home			0.36
Children's safety during the daytime in neighborhood			
Number of magazines regularly received			
Number of days newspaper is received			
How often does child read for enjoyment?[a]			
Cronbach coefficient alpha for scale	0.65	0.63	0.79

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: Items were included on the factors in which they most highly loaded.
Items without factors are included only in the total scale.

[a]These items were used to create a scale to be in common with the Project on State-Level Child Outcomes.

[b]These items were used to create a scale to be in common with the Project on State-Level Child Outcomes. One additional item, "How often does family eat evening meal together," was used to create this scale.

Table C.2

Items and Factor Loadings for Parenting Scales

Item	Aggravation	Warmth	Harshness	Supervision
How many times in the past month have you felt:				
Child is much harder to care for than most?	0.76			
Child does things that are really irritating?	0.83			
You are giving up more than ever expected for child?	0.66			
Angry with your child?	0.60			
How many times in the past week have you:				
Shown child physical affection?		0.86		
Praised child for doing something worthwhile?		0.93		
Told another adult something positive about child?		0.89		
Had to spank child?			0.57	
Had to scold, yell at, or threaten child?			0.71	
Gotten really angry or lost your temper with child?			0.77	
How often do you know:				
Who child is with when (he/she) is away from home?				0.84
Where child is when (he/she) is away from home?				0.86
If child arrived back home when (he/she) was supposed to?				0.75
Whether child has finished any homework?				0.55
Cronbach coefficient alpha for scale	0.70	0.82	0.57	0.69

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTE: Items were included on the factors in which they most highly loaded.

Table C.3

Items and Factor Loadings for the Behavioral Problems Index (BPI) Subscales

Item in Total Scale	Internalizing Behavior	Externalizing Behavior
Has sudden changes in mood or feelings	0.35	
Feels or complains that no one loves him or her[a]	0.46	
Is rather high strung, tense, and nervous	0.45	
Is too fearful or anxious	0.66	
Feels worthless or inferior[a]	0.60	
Is unhappy, sad or depressed[a]	0.51	
Is withdrawn, does not get involved with others[a]	0.47	
Clings to adults	0.55	
Cries too much	0.61	
Demands a lot of attention	0.40	
Is too dependent on others	0.65	
Cheats or tells lies[b]		0.58
Argues too much		0.46
Bullies or is cruel or mean to others[b]		0.68
Is disobedient at home[b]		0.55
Does not seem to feel sorry after misbehavior[b]		0.54
Has trouble getting along with other children		0.58
Is impulsive, or acts without thinking		0.60
Is restless or overly active, cannot sit still		0.54
Has a very strong temper and loses it easily		0.55
Breaks things on purpose		0.48
Is disobedient at school[b]		0.90
Has trouble getting along with teachers		0.75
Has difficulty concentrating and paying attention		
Is easily confused, seems to be in a fog		
Is not liked by other children[a]		
Has obsessions		
Is stubborn, sullen, or irritable		
Cronbach coefficient alpha for scale	0.80	0.87

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: Items were included on the factors in which they most highly loaded.
Items without factors are included only in the total scale.

[a]These items were used to create a scale to be in common with the Project on State-Level Child Outcomes.

[b]These items were used to create a scale to be in common with the Project on State-Level Child Outcomes.

Table C.4

Items and Factor Loadings for the Positive Behavior Scale (PBS) Subscales

Item in Total Scale	Compliance	Social Competence	Autonomy
Waits his or her turn in games or other activities	0.73		
Thinks before he or she acts, is not impulsive	0.78		
Gets along well with other children[a]	0.46		
Usually does what I tell (him/her) to do	0.72		
Is able to concentrate or focus on an activity	0.69		
Is helpful and cooperative[a]	0.49		
Is considerate and thoughtful of other children[a]	0.54		
Is obedient, follows rules	0.76		
Is calm, easy-going	0.75		
Sticks with an activity until it is finished	0.70		
Is patient if I am busy and (he/she) wants something	0.76		
Is cheerful, happy[a]		0.61	
Is warm, loving		0.82	
Is curious and exploring, likes new experiences		0.62	
Shows concern for other people's feelings[a]		0.62	
Shows pride when (he/she) does well or learns		0.69	
Tends to give, lend, and share[a]		0.47	
Is eager to please		0.41	
Tries to do things for (himself/herself), is self-reliant			0.66
Can easily find something to do on (his/her) own			0.49
Sticks up for (himself/herself), is self-assertive			0.71
Tries to be independent, to do things (himself/herself)			0.79
Can get over being upset quickly			
Is admired and well liked by other children[a]			
Is easily comforted when (he/she) gets angry			
Cronbach coefficient alpha for scale	0.93	0.85	0.79

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: Items were included on the factors in which they most highly loaded.
Items without factors are included only in the total scale.

[a]These items were used to create a scale to be in common with the Project on State-Level Child Outcomes.

Table C.5

Actual Ranges for Outcomes Coded on a Continuous Range

Outcome	Mean	Standard Deviation	Minimum	Maximum
Perceptions of financial strain	2.8	0.7	1	4
Index of material hardship	1.5	1.5	0	7
Total hours in care last week	10.8	19.5	0	168
Total hours in self-care last week	1.3	7.7	0	168
Total months in formal care	7.8	12.2	0	36
Total months in informal care	14.2	14.7	0	36
Total months with one arrangement	14.8	14.1	0	36
Total HOME scale	76.9	7.9	46	97
HOME cognitive subscale	26.4	4.1	13	36
HOME routines subscale	16.4	2.6	7	21
HOME physical environment subscale	25.1	4.1	10	30
Depression scale	16.4	11.4	0	58
Aggravation scale	1.8	0.5	1	4
Warmth scale	3.5	0.7	1	4
Harsh-parenting scale	1.6	0.6	1	4
Supervision scale	4.6	0.6	1	5
Total BPI score	11.2	8.9	0	51.5
BPI externalizing subscore	5.1	4.4	0	23
BPI internalizing subscore	4.2	3.5	0	21
Total PBS score	196.7	36.2	12	250
PBS compliance subscore	81.9	19.1	0	110
PBS social competence subscore	59.4	9.3	9	70
PBS autonomy subscore	32.6	6.6	0	40
Performance in school	4.1	1.1	1	5
Engagement in school	10.2	1.8	4	12
Sample size (total = 1,929)				

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTE: Sample size may slightly vary for each outcome variable.

Appendix D

MFIP's Effects on Children in All Counties and in Rural Counties

This appendix presents MFIP's impacts on families and children in the four rural counties (Mille Lacs, Morrison, Sherburne, and Todd). The rural counties were not combined with the urban counties in the main report because the three-group research design was not implemented in the rural areas. The impacts discussed should be interpreted with some caution, given that the sample sizes for the rural counties are very small.

Tables D.1 and D.2 present a summary of MFIP's effects for urban counties, rural counties, and all counties combined. The results for the urban counties in Table D.1 are reproduced from Chapter 3 and show MFIP's positive effects on earnings, income, and child outcomes for long-term recipients. In the rural counties, MFIP increased mothers' employment rates but did not increase their earnings. On average, however, MFIP mothers had higher incomes from earnings and welfare because of an increase in welfare receipt. See Volume 1 for more discussion about possible reasons for the different impacts in rural counties (Miller et al., 2000).

A comparison of the two AFDC groups shows that, in general, children in the rural counties fared better than their urban counterparts. Rural mothers reported fewer behavioral problems, better health, and better school progress for their children. Table D.3 presents a wider range of outcomes. Comparing AFDC group outcomes with data from Chapter 3 shows that rural long-term recipients were more likely than urban long-term recipients to have been married at the time of the survey (20 percent compared with 6.2 percent), less likely to have been abused in the past three years, and less likely to have been at high risk of clinical depression. These differences may partly explain why children in the rural counties generally fared better than children in the urban counties.

In terms of MFIP's impacts, however, the program had little effect on children in the rural counties, as shown in Table D.1, and little effect on the intermediate outcomes, as shown in Table D.3. The exception to this pattern is that MFIP increased the number of children who had continuous health insurance coverage, most likely because it increased rates of welfare receipt.

Tables D.2 and D.4 present MFIP's effects on recent applicants. The key difference between the urban and rural families in terms of direct outcomes is that MFIP had a much greater effect on family income in the rural counties ($1,357 compared with $137), largely because the increase in welfare benefits was not matched by a decrease in earnings. Despite the increase in income, MFIP did not have any statistically significant effects on child outcomes for rural recent applicants, nor did it affect any intermediate outcomes (see Table D.4). A relatively high percentage of rural families in the AFDC group used informal child care (86.3 percent), and MFIP seems to have caused some families to switch to formal child care, although the increase (13.2 percentage points) is not statistically significant. A somewhat odd result is that MFIP did not increase the number of children continuously covered by health insurance, as it did for most other groups. As noted earlier, the sample sizes for rural counties are very small, so the impacts should be interpreted with caution.

Table D.1

Summary of Impacts on Participation, Employment, Earnings, Welfare, Income, Poverty, and Child Outcomes for Long-Term Recipients

Outcome	Urban Counties MFIP	Urban Counties AFDC	Urban Counties Impact (Difference)	Rural Counties MFIP	Rural Counties AFDC	Rural Counties Impact (Difference)	All Counties[a] MFIP	All Counties[a] AFDC	All Counties[a] Impact (Difference)
Participation, employment, earnings, income, welfare, and poverty									
Ever participated in an employment-related activity (from administrative records) (%)	91.4	71.6	19.8 ***	87.2	72.2	15.0 **	90.1	71.6	18.4 ***
Average annual employment (%)	72.8	57.7	15.1 ***	68.8	57.5	11.2 **	72.1	57.8	14.3 ***
Average annual earnings ($)	4,657	3,906	751 *	4,061	4,139	-78	4,533	3,938	596 *
Average quarterly receipt rate (%)	91.0	86.5	4.5 **	91.9	83.0	9.0 **	91.0	85.7	5.4 ***
Average annual welfare benefit ($)	7,014	6,458	556 **	6,697	5,540	1,157 ***	6,930	6,278	651 ***
Average annual income from welfare and earnings ($)	11,671	10,364	1,307 ***	10,758	9,679	1,079 *	11,463	10,216	1,247 ***
Measured poverty[b] (%)	68.5	81.3	-12.8 ***	79.1	83.1	-4.0	70.1	81.5	-11.5 ***
Child outcomes									
Behavioral Problems Index	11.2	12.7	-1.5 *	12.0	11.8	0.2	11.6	12.4	-0.8
Positive Behavior Scale	194.2	193.7	0.5	192.3	198.1	-5.8	193.5	194.8	-1.3
Child's health rated by mother as very good or excellent (%)	75.0	77.8	-2.8	78.3	85.1	-6.8	75.9	78.3	-2.4
Engagement in school	10.2	9.9	0.3 **	10.3	10.2	0.1	10.2	9.9	0.3 *
Performance in school	4.1	4.0	0.2 *	4.1	4.2	0.0	4.1	4.0	0.1
Ever repeated a grade?	5.4	3.6	1.8	0.2	3.7	-3.5	4.7	3.8	0.9
Sample size (total = 1,568)	306	281		92	105		398	386	

(continued)

Table D.1 (continued)

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and welfare benefit records.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix for details regarding the construction of outcomes.

[a]A higher fraction of the caseload in the rural counties than the urban counties was randomly assigned into the evaluation, meaning that the rural counties are overrepresented in the full evaluation sample. To account for this, the rural counties were weighted down by a factor of .57 when estimating impacts for urban and rural counties combined.

[b]Measured poverty is defined as the percentage of families whose earnings plus welfare benefits are below the official poverty threshold. The appropriate threshold is determined by the number of children in the family. Because the measure of income used here includes earnings, cash welfare, and Food Stamp benefits but does not include income from other sources, the measured poverty rate presented here is not comparable with the official poverty rate.

Table D.2

Summary of Impacts on Participation, Employment, Earnings, Welfare, Income, Poverty, and Child Outcomes for Recent Applicants

Outcome	Urban Counties MFIP	Urban Counties AFDC	Urban Counties Impact (Difference)	Rural Counties MFIP	Rural Counties AFDC	Rural Counties Impact (Difference)	All Counties[a] MFIP	All Counties[a] AFDC	All Counties[a] Impact (Difference)
Participation, employment, earnings, income, welfare, and poverty									
Ever participated in an employment-related activity (from administrative records) (%)	75.1	64.8	10.3 **	73.0	69.6	3.4	73.8	65.1	8.7 **
Average annual employment (%)	74.6	71.2	3.3	76.1	71.8	4.3	75.1	71.4	3.8
Average annual earnings ($)	6,817	7,438	-620	6,530	5,854	676	6,897	7,322	-425
Average quarterly receipt rate (%)	72.4	66.2	6.3 **	79.4	73.8	5.6	72.8	66.9	5.8 **
Average annual welfare benefit ($)	4,530	3,772	757 ***	4,486	3,805	681	4,414	3,698	715 ***
Average annual income from welfare and earnings ($)	11,347	11,210	137	11,016	9,660	1,357 *	11,311	11,020	291
Measured poverty[b] (%)	63.6	70.2	-6.6	61.5	76.5	-15.0 *	63.3	70.2	-6.9 **
Child outcomes									
Behavioral Problems Index	10.8	9.8	1.0	12.2	10.2	1.9	11.1	9.8	1.3 *
Positive Behavior Scale	196.8	200.0	-3.2	195.5	196.4	-0.9	196.1	199.3	-3.2
Child's health rated by mother as very good or excellent (%)	77.2	78.7	-1.4	83.4	90.8	-7.5	79.0	80.9	-1.9
Engagement in school	10.2	10.4	-0.2	10.4	10.2	0.2	10.2	10.4	-0.1
Performance in school	4.2	4.3	-0.1	4.2	4.0	0.1	4.2	4.2	-0.1
Ever repeated a grade?	2.0	4.6	-2.6	2.6	3.6	-1.0	2.2	4.5	-2.3
Sample size (total = 1,378)	258	259		97	75		355	334	

(continued)

Table D.2 (continued)

SOURCES: MDRC calculations using data from Minnesota Unemployment Insurance earnings records and welfare benefit records.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

[a]A higher fraction of the caseload in the rural counties than the urban counties was randomly assigned into the evaluation, meaning that the rural counties are overrepresented in the full evaluation sample. To account for this, the rural counties were weighted down by a factor of .57 when estimating impacts for urban and rural counties combined.

[b]Measured poverty is defined as the percentage of families whose earnings plus welfare benefits are below the official poverty threshold. The appropriate threshold is determined by the number of children in the family. Because the measure of income used here includes earnings, cash welfare, and Food Stamp benefits but does not include income from other sources, the measured poverty rate presented here is not comparable with the official poverty rate.

Table D.3

MFIP's Impacts on Selected Direct, Intermediate, and Child Outcomes for Long-Term Recipients in Rural Counties

Outcome	MFIP	AFDC	Impact (Difference)	Effect Size[a]
Direct Outcomes				
Ever participated in an employment-related activity (%)	87.2	72.2	15.0 **	0.34
Average quarterly employment rate	68.8	57.5	11.2 **	0.30
Average annual earnings ($)	4,061	4,139	-78	0.02
Average annual welfare benefit ($)	6,697	5,540	1,157 ***	0.36
Average annual income from benefits and earnings ($)	10,758	9,679	1,079 *	0.26
Intermediate Outcomes				
Ever a time when any children were not covered by insurance?	82.8	66.2	16.6 **	0.36
Never used child care (%)	22.6	24.9	-2.3	0.05
Formal child care (%)	43.3	35.9	7.4	0.16
Informal child care (%)	63.0	72.2	-9.2	0.20
Total HOME scale	75.9	76.8	-0.9	0.13
Currently married (%)	22.9	20.0	2.9	0.07
Currently married to biological father (%)	3.0	1.2	1.8	0.13
Mother ever abused in last 3 years (%)	57.1	50.1	7.0	0.14
Mother at high risk of clinical depression (%)	27.5	19.5	8.1	0.20
Parenting behavior				
Aggravation scale	1.7	1.7	0.0	0.00
Warmth scale	3.3	3.6	-0.2 **	0.44
Harsh-parenting scale	1.6	1.6	0.0	0.01
Supervision scale	4.6	4.7	0.0	0.09
Child Outcomes				
Behavioral Problems Index	12.0	11.8	0.2	0.02
Positive Behavior Scale	192.3	198.1	-5.8	0.18
Child's health rated by mother as very good or excellent (%)	78.3	85.1	-6.8	0.18
Performance in school	4.1	4.2	0.0	0.02
Engagement in school	10.3	10.2	0.1	0.05
Ever repeated a grade (%)	0.2	3.7	-3.5	0.18
Sample size (total = 197)	92	105		

(continued)

Table D.3 (continued)

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

[a]The effect size is the difference between program and control group outcomes expressed as a proportion of the standard deviation of the outcome for both groups combined. The standard deviation is always obtained from the full research sample, even if the table shows impacts for subgroups.

Table D.4

Summary of Direct, Intermediate, and Child Outcomes for Recent Applicants in Rural Counties

Outcome	MFIP	AFDC	Impact (Difference)	Effect Size[a]
Direct Outcomes				
Ever participated in an employment-related activity (%)	73.0	69.6	3.4	0.07
Average quarterly employment rate	76.1	71.8	4.3	0.13
Average annual earnings ($)	6,530	5,854	676	0.11
Average annual welfare benefit ($)	4,486	3,805	681	0.20
Average annual income from benefits and earnings ($)	11,016	9,660	1,357 *	0.28
Intermediate Outcomes				
Ever a time when any children were not covered by insurance?	65.1	71.8	-6.7	0.14
Never used child care (%)	8.9	7.9	1.0	0.04
Formal child care (%)	50.7	37.5	13.2	0.27
Informal child care (%)	78.3	86.3	-8.0	0.22
Total HOME scale	77.3	77.8	-0.4	0.08
Currently married (%)	18.2	29.8	-11.6	0.25
Currently married to biological father (%)	5.6	6.3	-0.8	0.03
Mother ever abused in last 3 years (%)	51.4	54.2	-2.8	0.06
Mother at high risk of clinical depression (%)	24.5	20.5	4.1	0.10
Parenting behavior				
Aggravation scale	1.6	1.7	-0.1	0.13
Warmth scale	3.6	3.5	0.0	0.07
Harsh-parenting scale	1.7	1.6	0.1	0.22
Supervision scale	4.8	4.7	0.0	0.05
Child Outcomes				
Behavioral Problems Index	12.2	10.2	1.9	0.24
Positive Behavior Scale	195.5	196.4	-0.9	0.03
Child's health rated by mother as very good or excellent (%)	83.4	90.8	-7.5	0.24
Performance in school	4.2	4.0	0.1	0.14
Engagement in school	10.4	10.2	0.2	0.08
Ever repeated a grade (%)	2.6	3.6	-1.0	0.05
Sample size (total = 172)	97	75		

(continued)

Table D.4 (continued)

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who had a child age 5 to 12 at the time of the survey, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

[a]The effect size is the difference between program and control group outcomes expressed as a proportion of the standard deviation of the outcome for both groups combined. The standard deviation is always obtained from the full research sample, even if the table shows impacts for subgroups.

Appendix E

MFIP's Effects on Selected Child Outcomes for All Children in the MFIP Evaluation

This appendix presents MFIP's impacts on selected measures of children's academic functioning for all children in the MFIP evaluation. Information about grade performance, grade repetition, and behavior problems in school was collected in the core section of the survey for all children age 5 to 18. Thus, even though the text of this report focuses on these outcomes for focal children of single parents who were age 2 to 9 at the time of random assignment, these outcomes are actually available for each child, age 5 to 18 at the time of the interview, for all families in the MFIP evaluation who responded to the survey. Because information was collected for each child in the family, these outcomes are analyzed at the child level. Standard errors are adjusted to account for the presence of multiple siblings in the family.

Five outcomes are analyzed. The first is maternal reports of a child's average performance in school. Mothers responded on a scale of 1 ("very well") to 5 ("not well at all"). These items were reverse-coded to construct a mean, where a higher value indicates better performance in school. Two additional outcomes were created from this item: performance is above average ("above average" or "very well") and performance is below average ("below average" or "not well at all"). The fourth outcome assesses whether or not a child ever repeated a grade. The fifth outcome assesses whether or not the parent was contacted by the school about the child's behavioral problems.

One advantage to analyzing these data is that MFIP's impacts on child well-being may now be examined for a representative set of families in the full evaluation, and because outcomes were collected for each child in the family, the sample sizes are relatively large. With a larger sample size these impacts may confirm results that were found for one focal child. An additional advantage is that these outcomes offer one snapshot of MFIP's impacts on adolescents (that is, children over age 12 at the time of the interview). Despite these advantages, the outcomes represent only a very specific aspect of child well-being, and thus caution should be exercised in drawing broad conclusions about how MFIP affected children. For example, MFIP may affect children's behavior, particularly adolescent delinquent behavior, and these behavior outcomes are not available. Finally, as a reminder, these outcomes are based on maternal reports.

Table E.1 presents MFIP's impacts on these outcomes for children in single-parent and two-parent families. The impacts are presented for the same subgroups of families that are analyzed in Volume 1: urban single-parent long-term recipients, urban single-parent recent applicants, rural single-parent long-term recipients, rural single-parent recent applicants, and two-parent family recipients. As discussed in Volume 1, MFIP generally increased employment and income among urban and rural single-parent families; it decreased the employment of at least one parent in two-parent recipient families and increased marital stability among two-parent recipient families (Miller et al., 2000). In summary, the impacts presented in Table E.1 show that MFIP had some beneficial effects on all children of urban single-parent long-term recipients, consistent negative effects on all children of urban single-parent recent applicants, and some beneficial effect on all children of two-parent family recipients.

For all children of urban single-parent long-term recipients, MFIP significantly reduced the likelihood of performing below average but had no impact on other measures of academic functioning. For all children of urban single-parent recent applicants, MFIP significantly reduced performance in school, both by decreasing performance that was above average and by increasing performance that was below average; it also increased grade repetition and increased the likelihood that a parent was contacted about a child's behavioral problems at school. These

negative effects on children of urban single-parent recent applicants are very consistent across outcomes — and somewhat surprising, because they were not found for the focal children of recent applicant families analyzed in the report. For children in rural families, MFIP had no impact on academic functioning. Finally, for all children in two-parent recipient families, MFIP has no significant effect. It is especially unfortunate that more measures of well-being are not available for the children of two-parent family recipients, given MFIP's effects of reducing the employment of one parent and increasing marital stability.

Table E.2 presents MFIP's impacts and decomposition for all children in urban single-parent long-term recipient families, by child's age. The age ranges were constructed partly to match the age range of the focal children in the report, that is, children age 9 or less at the time of random assignment. These impacts show that MFIP's beneficial effects on early-school-age children hold up for a larger sample. This is particularly true for the effects of MFIP's financial incentives (not shown). For children age 10 or older at the time of random assignment, there is one significant impact: decreasing the likelihood of performing above average in school. This may suggest that the beneficial effects of MFIP on children of long-term recipients are confined to younger children. It is difficult to conclude this, however, without seeing more consistency across the impacts on schooling and without having any information about adolescent behavior.

Table E.3 presents MFIP's impacts for all children in urban single-parent recent applicant families, by child's age. These impacts show that the negative effects of MFIP on children of recent applicants are present only for the children age 10 or older at the time of random assignment, who were adolescents at the time of the interview. These latter impacts explain why the negative effects were not found for the focal children who were age 5 to 12 at the time of random assignment in the report. How or why did MFIP negatively affect adolescents of recent applicants? For all recent applicants, MFIP significantly increased employment but had no significant impact on earnings, although it did increase income measured from earnings and welfare benefits. Recent applicants worked part time, and more of them worked for lower wages. The impacts on employment, earnings, and income may be different for the subgroup of recent applicants with adolescents. This warrants investigation, especially because the impacts on adults are likely linked to the impacts on these adolescent children. Unfortunately, many of the intermediate outcomes — such as the quality of the home environment, parenting, maternal depression, and domestic abuse — were measured in the child section of the survey, and impacts thus are unavailable to analyze for this group of older children.

Table E.1

MFIP's Impacts on Selected Measures of Academic Functioning for All Children in the MFIP Evaluation

Outcome	MFIP	AFDC	Impact (Difference)
Urban Counties			
Single-parent long-term recipients			
Performance in school	3.9	3.9	0.0
Performance is above average (%)	40.9	44.4	-3.5
Performance is below average (%)	11.8	15.3	-3.5 *
Ever repeated a grade? (%)	8.6	8.3	0.3
Contacted by school about child's behavioral problems? (%)	35.5	33.9	1.6
Sample size (total = 1,450)	754	696	
Single-parent recent applicants			
Performance in school	3.9	4.1	-0.2 **
Performance is above average (%)	43.8	50.5	-6.7 **
Performance is below average (%)	14.0	10.0	4.1 *
Ever repeated a grade? (%)	9.2	6.8	2.5
Contacted by school about child's behavioral problems? (%)	31.4	26.7	4.8
Sample size (total = 1,344)	692	652	
Rural Counties			
Single-parent long-term recipients			
Performance in school	4.0	4.1	0.0
Performance is above average (%)	42.3	45.3	-2.9
Performance is below average (%)	9.4	7.4	1.9
Ever repeated a grade? (%)	5.9	8.2	-2.2
Contacted by school about child's behavioral problems? (%)	28.3	27.1	1.2
Sample size (total = 490)	218	272	
Single-parent recent applicants			
Performance in school	4.0	4.0	0.0
Performance is above average (%)	45.5	42.9	2.7
Performance is below average (%)	10.9	9.0	1.9
Ever repeated a grade? (%)	8.9	6.6	2.2
Contacted by school about child's behavioral problems? (%)	27.1	26.1	1.0
Sample size (total = 482)	253	229	

(continued)

Table E.1 (continued)

Outcome	MFIP	AFDC	Impact (Difference)
Two-parent family recipients			
Performance in school	4.0	3.9	0.0
Performance is above average (%)	45.3	39.2	6.1
Performance is below average (%)	13.3	9.4	4.0
Ever repeated a grade? (%)	7.0	6.4	0.6
Contacted by school about child's behavioral problems? (%)	22.2	26.8	-4.6
Sample size (total = 612)	324	288	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to March 31, 1996, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

Table E.2

MFIP's Impacts on Selected Measures of Academic Functioning for All Long-Term Recipient Children in Urban Counties from the MFIP Evaluation, by Child's Age

Outcome	MFIP	AFDC	Impact (Difference)
Less than 6 years old			
Performance in school	4.2	4.1	0.1
Performance is above average (%)	54.8	53.8	0.9
Performance is below average (%)	6.3	11.0	-4.7 *
Ever repeated a grade? (%)	5.2	3.8	1.4
Contacted by school about child's behavioral problems? (%)	26.7	26.2	0.6
Sample size (total = 692)	355	337	
6 to 9 years old			
Performance in school	3.8	3.7	0.1
Performance is above average (%)	34.0	37.7	-3.8
Performance is below average (%)	11.1	16.8	-5.7
Ever repeated a grade? (%)	4.5	8.0	-3.6
Contacted by school about child's behavioral problems? (%)	40.6	39.8	0.8
Sample size (total = 459)	246	213	
10 years old or older			
Performance in school	3.6	3.6	0.0
Performance is above average (%)	27.7	38.9	-11.3 *
Performance is below average (%)	21.6	23.0	-1.4
Ever repeated a grade? (%)	14.6	17.7	-3.1
Contacted by school about child's behavioral problems? (%)	43.9	37.6	6.3
Sample size (total = 318)	164	154	

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to March 31, 1996, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C for details regarding the construction of outcomes.

Table E.3

MFIP's Impacts on Selected Measures of Academic Functioning for All Recent Applicant Children in Urban Counties from the MFIP Evaluation, by Child's Age

Outcome	MFIP	AFDC	Impact (Difference)	
Less than 6 years old				
Performance in school	4.3	4.3	0.0	
Performance is above average (%)	57.6	59.5	-1.9	
Performance is below average (%)	5.3	4.6	0.7	
Ever repeated a grade? (%)	2.7	3.0	-0.2	
Contacted by school about child's behavioral problems? (%)	16.6	18.8	-2.2	
Sample size (total = 577)	284	293		
6 to 9 years old				
Performance in school	4.0	4.1	-0.1	
Performance is above average (%)	49.5	49.8	-0.3	
Performance is below average (%)	11.1	8.3	2.7	
Ever repeated a grade? (%)	7.5	5.2	2.3	
Contacted by school about child's behavioral problems? (%)	29.9	32.1	-2.1	
Sample size (total = 423)	217	206		
10 years old or older				
Performance in school	3.4	3.7	-0.3	**
Performance is above average (%)	24.3	36.3	-12.1	**
Performance is below average (%)	24.9	16.6	8.3	*
Ever repeated a grade? (%)	17.0	12.1	4.9	
Contacted by school about child's behavioral problems? (%)	44.9	33.4	11.5	***
Sample size (total = 366)	196	170		

SOURCE: MDRC calculations using data from the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to March 31, 1996, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

See Chapter 3 and Appendix C in the report for details regarding the construction of outcomes.

Appendix F

Summary of MFIP's Impacts Converted into Effect Sizes

Table F.1

Summary of Impacts on Direct, Intermediate, and Child Outcomes Converted into Effect Sizes for Long-Term Recipients in Urban Counties

Outcome	AFDC Outcome	MFIP vs. AFDC Impact (Difference)	MFIP vs. AFDC Effect Size[a]	MFIP Incentives Only vs. AFDC Impact (Difference)	MFIP Incentives Only vs. AFDC Effect Size[a]	MFIP vs. MFIP Incentives Only Impact (Difference)	MFIP vs. MFIP Incentives Only Effect Size[a]
Direct Outcomes							
Ever participated in an employment-related activity (%)	71.6	19.8 ***	0.44	5.0	0.11	14.8 ***	0.33
Average quarterly employment rate	57.7	15.1 ***	0.38	8.5 ***	0.21	6.6 **	0.16
Average annual earnings ($)	3,906	751 *	0.14	60	0.01	691 *	0.13
Average annual welfare benefit ($)	6,458	556 **	0.16	1,078 ***	0.31	-522 **	0.15
Average annual income from benefits and earnings ($)	10,364	1,307 ***	0.28	1,138 ***	0.25	169	0.04
Intermediate Outcomes							
Children continuously covered by health insurance in past 36 months (%)	67.0	8.5 **	0.18	11.7 ***	0.25	-3.2	0.07
Never used child care (%)	22.0	-9.9 ***	0.24	-1.7	0.04	-8.2 ***	0.20
Formal child care (%)	42.3	10.6 ***	0.21	-0.5	0.01	11.0 ***	0.22
Informal child care (%)	67.7	7.5 *	0.16	0.2	0.00	7.4 *	0.16
Total HOME scale	75.5	0.2	0.02	0.7	0.08	-0.5	0.06
Currently married and living with spouse (%)	6.2	5.0 **	0.21	4.1 *	0.17	0.9	0.04
Currently married to biological father (%)	0.9	1.8	0.22	2.1 *	0.24	-0.2	0.03
Ever abused in last 3 years (%)	59.6	-10.5 **	0.21	-9.7 **	0.20	-0.8	0.02
At high risk of clinical depression (%)	31.6	-2.8	0.06	-8.4 **	0.18	5.6	0.12
Parenting behavior							
Aggravation scale	1.9	-0.1	0.12	-0.1	0.09	0.0	0.03
Warmth scale	3.5	0.0	0.06	0.1	0.10	-0.1 *	0.16
Harsh-parenting scale	1.7	0.0	0.03	-0.1	0.13	0.1	0.10
Supervision scale	4.5	0.1 **	0.17	0.1	0.12	0.0	0.05
Child Outcomes							
Behavioral Problems Index	12.7	-1.5 *	0.14	-1.5 *	0.15	0.1	0.00
Positive Behavior Scale	193.7	0.5	0.01	6.9 **	0.18	-6.4 *	0.16
Child's health rated by mother as very good or excellent (%)	77.8	-2.8	0.07	2.6	0.06	-5.4	0.13
Performance in school	4.0	0.2 *	0.15	0.2 *	0.14	0.0	0.01
Engagement in school	9.9	0.3 **	0.17	0.4 **	0.20	-0.1	0.03
Ever repeated a grade (%)	3.6	1.8	0.10	0.4	0.02	1.5	0.08
Sample size (total = 879)	281						

(continued)

Table F.1 (continued)

SOURCES: MDRC calculations using data from Minnesota's Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who were on welfare for two years or more prior to random assignment and had a focal child age 5 to 12, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

[a]The effect size is the difference between program and control group outcomes expressed as a proportion of the standard deviation of the outcome for both groups combined. The standard deviation is always obtained from the full research sample, even if the table shows impacts for subgroups.

Table F.2

Summary of Impacts on Direct, Intermediate, and Child Outcomes Converted into Effect Sizes for Recent Applicants in Urban Counties

Outcome	AFDC Outcome	MFIP vs. AFDC Impact (Difference)	MFIP vs. AFDC Effect Size[a]	MFIP Incentives Only vs. AFDC Impact (Difference)	MFIP Incentives Only vs. AFDC Effect Size[a]	MFIP vs. MFIP Incentives Only Impact (Difference)	MFIP vs. MFIP Incentives Only Effect Size[a]
Direct Outcomes							
Ever participated in an employment-related activity (%)	64.8	10.3 **	0.21	-3.9	0.08	14.2 ***	0.29
Average quarterly employment rate	71.2	3.3	0.09	2.6	0.07	0.7	0.02
Average annual earnings ($)	7,438	-620	0.08	-1,168	0.15	548	0.07
Average annual welfare benefit ($)	3,772	757 ***	0.22	1,158 ***	0.34	-401	0.12
Average annual income from benefits and earnings ($)	11,210	137	0.02	-10	0.00	147	0.02
Intermediate Outcomes							
Children continuously covered by health insurance in past 36 months (%)	62.7	7.2 *	0.15	13.3 **	0.27	-6.1	0.12
Never used child care (%)	12.2	0.9	0.03	4.3	0.13	-3.4	0.10
Formal child care (%)	48.8	4.9	0.10	-4.6	0.09	9.5 *	0.19
Informal child care (%)	76.6	-2.7	0.06	-2.7	0.06	0.0	0.00
Total HOME scale	78.7	-0.3	0.04	-0.4	0.06	0.1	0.02
Currently married and living with spouse (%)	20.8	2.7	0.07	-6.9	0.17	9.6 **	0.23
Currently married to biological father (%)	8.2	1.8	0.06	-3.3	0.11	5.0 *	0.18
Ever abused in last 3 years (%)	49.1	-0.4	0.01	5.0	0.10	-5.4	0.11
At high risk of clinical depression (%)	20.6	1.5	0.04	2.9	0.07	-1.4	0.03
Parenting behavior							
Aggravation scale	1.7	0.0	0.08	0.1	0.21	-0.1	0.13
Warmth scale	3.4	0.1	0.14	-0.1	0.09	0.2 *	0.24
Harsh-parenting scale	1.5	0.1 **	0.26	0.2 ***	0.37	-0.1	0.11
Supervision scale	4.6	-0.1	0.13	-0.1	0.15	0.0	0.02
Child Outcomes							
Behavioral Problems Index	9.8	1.0	0.13	0.9	0.12	0.1	0.01
Positive Behavior Scale	200.0	-3.2	0.10	-3.4	0.11	0.3	0.01
Child's health rated by mother as very good or excellent (%)	78.7	-1.4	0.04	2.4	0.06	-3.9	0.10
Child's performance in school	4.3	-0.1	0.11	-0.2 *	0.20	0.1	0.09
Child's engagement in school	10.4	-0.2	0.13	-0.5 **	0.28	0.3	0.15
Child ever repeated a grade (%)	4.6	-2.6	0.13	1.2	0.06	-3.8 *	0.18
Sample size (total = 652)	259						

(continued)

Table F.2 (continued)

SOURCES: MDRC calculations using data from Minnesota Unemployment Insurance (UI) earnings records and the 36-month client survey.

NOTES: The sample includes members randomly assigned from April 1, 1994, to October 31, 1994, who were on welfare for two years or more prior to random assignment and had a focal child age 5 to 12, excluding the small percentage who were receiving or applying only for Food Stamps at random assignment.

A two-tailed t-test is applied to regression-adjusted impact estimates. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

Sample size may slightly vary for each outcome variable.

Rounding may cause slight discrepancies in sums and differences.

[a]Effect size is calculated as the impact divided by the standard deviation of the outcome for the control group.

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